
INPUT

VENDOR ANALYSIS
PROGRAM



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1995

Technalysis Corporation

Chairman & CEO: Victor A. Rocchio
President & COO: Jerry Snyder
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Status:	Public
Employees:	244 (12/94)
Revenue:	\$ 16,844,569
Fiscal Year End:	12/31/94

Key Points

- Technalysis is a professional services and data processing firm dedicated to designing, developing and implementing data processing applications, products and information systems on mainframe, midrange and client/server computer systems.
- Revenues have not changed substantially over the past five years, and continued losses in two remote branch offices and increased expansion costs contributed to the low earnings in 1994.

- In late 1993, due to marketing problems and lack of significant growth at the branch level, Technalysis closed its start-up office in Denver and suspended operations in its Columbia office.
- In May 1994, Jerry Snyder was appointed president and chief operating officer with responsibility for all branches.
- Technalysis' Minneapolis office still remains the strongest contributor to the revenues and accounted for 82% of the company's revenue in 1994.

Company Description

Technalysis, incorporated in 1967, provides contract programming, systems development and consulting professional services to clients in a range of industries.

Organization and Structure

During 1994, Technalysis provided its services through offices located in four geographic areas—Minneapolis (MN), Southfield (MI), Falls Church (VA) and Cincinnati (OH).

Technalysis had two additional offices in Denver (CO) and Columbus (OH). The Denver was closed in August 1993 and the Columbus office's operations have been suspended.

Company Strategy

Technalysis' strategy is to attract and retain personnel with high professional personal standards.

The company seeks to establish long-term support relationships with its clients that extend beyond the initial development project.

In order to solve various marketing problems, the company is restructuring the operations of its Southfield and Cincinnati offices under the direction of Jerry Snyder.

Financials

Technalysis' 1994 revenue was \$16.8 million, a 6% decrease from 1993 revenue of \$17.9 million. Net income fell 18%, from \$1.5 million in 1993 to \$1.2 million in 1994. A five-year financial summary follows:

**Technalysis Corporation
Five-Year Financial Summary**
(\$ Thousands, except per share data)

Item	Fiscal Year				
	1994	1993	1992	1991	1990
Revenue	\$16,844	\$17,886	\$19,144	\$18,420	\$20,531
• Percent change from previous year	(6%)	(7%)	4%	(10%)	(1%)
Income before taxes	\$2,055	\$2,495	\$1,969	\$3,148	\$3,605
• Percent change from previous year	(18%)	27%	(37%)	(13%)	6%
Net income	\$1,223	\$1,485	\$1,215	\$1,888	\$2,163
• Percent change from previous year	(18%)	22%	(36%)	(13%)	6%
Earnings per share	\$0.56	\$0.68	\$0.56	\$0.87	\$1.00
• Percent change from previous year	(18%)	21%	(36%)	(13%)	18%

Decrease in revenue was attributed to the following factors:

- Reduction in revenue in the company's remote offices
- Unrecognized revenues from the contract with the State of Minnesota
- Increase in operating costs as a percentage of revenue. Technalysis incurred operating expenses that were 89% of revenues in 1994, compared to approximately 87% in 1993.

Interim Results

Revenue for the three months ending March 31, 1995 was \$4.9 million, a 17% increase over \$4.2 million for the same period a year ago. Net income was \$232,096, a 28% decrease from the corresponding period in 1994.

Market Financials

Because of the cross-industry nature of Technalysis' services, there is no concentration of clients within a particular industry.

Technalysis has clients in various industries, including biomedical, construction, distribution, education, energy, engineering, finance, government, health services, insurance, media, process manufacturing, retail, services, telecommunications and transportation.

Professional services fees from various divisions of 3M contributed approximately 18%, 19% and 17% to the company's total revenue for 1994, 1993 and 1992, respectively.

Fees from the State of Minnesota contributed approximately 22%, 18% and

15% to total revenue for 1994, 1993 and 1992, respectively.

Geographic Markets

Virtually all of Technalysis' revenue is derived from the U.S.

The company has clients across the U.S. and has also served clients in Canada, England, Germany, Mexico, New Zealand, Singapore and Switzerland.

Technalysis' Minneapolis office contributed approximately 82% to the total revenue for 1994 with the remaining 18% split between the other three offices.

Employees

As of December 31, 1994, Technalysis had 244 employees, of which 206 were systems analysts/programmers.

Key Products and Services

Professional services provided by Technalysis include contract programming and system design, development and implementation.

The full range of services include:

- Project management
- Feasibility studies
- Requirements analysis
- Systems analysis and design
- Program specifications
- Programming and testing
- System documentation
- Database design and consulting
- Client/server computing
- Installation support
- User training
- Package modification and installation
- Software conversion service
- Systems integration
- Software engineering

Services are provided on an hourly (time and materials) or fixed-price basis. Most of the company's revenue is generated from hourly rate analysis and design and programming contracts in the development of general business applications.

Services are provided primarily at the customer's location, using the customer's computer systems.

Technalysis has custom software development experience in a range of application areas, including client/server, databases, device drivers, fourth generation languages, general business, hardware diagnostics, management information services, networking, on-line and real-time systems, scientific, statistics and telecommunications.

Clients

Technalysis' client list includes more than 60 Fortune 500 companies as well as other large and medium-sized organizations.

Technalysis' largest customers include 3M and the State of Minnesota.

Marketing and Sales

Technalysis markets its services through its headquarters and branch offices.

Alliances

Technalysis has the following alliances:

- IBM Business Partner
- Intersolv Approved Consultant for Excelerator
- Software AG Approved Consultant
- Computer Associates Approved Consultant
- Microsoft Solution Provider

Competitors

Technalysis competes with software divisions of many large companies, including IBM. Each branch office also competes with other independent software companies.

INPUT Assessment

Technalysis' strengths include:

- Customer satisfaction
- Quality of personnel
- The company stock has paid dividends since 1973

Challenges over the coming year include:

- Additional growth of branch offices
- Increased revenue and profit
- Strengthening of sales and marketing efforts

Vendor Profile

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November 1996

Technology Solutions Company (TSC)

Chairman: William H. Waltrip
President & CEO: John T. Kohler
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Phone: (312) 228-4500
Fax: (312) 228-4501
Internet: <http://www.TechSol.com>



Status:	Public
Employees:	737 (11/96)
Revenue:	\$97,599,000
Fiscal Year End:	5/31/96

Key Points

- Technology Solutions Company (TSC) provides business and technology consulting and systems integration services to a range of clients in multiple industries.
- In September 1996, TSC launched its Telecommunications practice to focus on the telecommunications industry. The move followed the June 1996 acquisition of

Chicago-based McLaughlin & Associates, which formally expanded TSC's work into high-end business strategy consulting.

- During 1996, international subsidiaries were established in Canada and Europe. In May 1996, TSC accelerated its expansion into Europe with the acquisition of Aspen Consultancy, a call center and communications consulting firm based in the U.K.
- In the fall of 1996, the company's Latin American operations were expanded with the opening of an office in Bogota (Columbia).

- In March 1996, TSC was chosen by Baan USA as an International Americas Partner for the installation of Baan's enterprise resource planning (ERP) software.
- In December 1995, TSC announced capabilities to support electronic commerce applications for its clients and prospects, including electronic supply chain and electronic marketplace management for the manufacturing, retail, distribution, financial services, managed health care, and technology industries.

Company Description

TSC provides strategic business and management consulting and information technology consulting and systems integration services to Fortune 1000 customers.

- Strategic business management and consulting services include business strategic planning, market research and analysis, new venture growth services, product and distribution channel planning, and organizational restructuring services.
- Information technology services include the identification of areas of a client's business that can benefit from computer technology, feasibility studies, business case justification, business process redesign and reengineering, benchmarking and best practices, project management, architecture, logical and physical systems design, hardware and software selection, programming, implementation, change management, education, training, and benefits realization.

Since its inception in May 1988, TSC has performed systems work for approximately 300 corporations.

Organization and Structure

TSC is organized into specific practice areas to better focus on the needs of its clients by providing specialized business and systems knowledge. TSC believes that a practice area structure gives its clients access to very specialized industry and systems knowledge and allows its employees the flexibility and opportunity to grow and develop.

TSC recently announced that the company is structured for growth into three units as follows:

Domestic Consulting and Systems Integration includes the following practice areas:

- **Products**—Serves organizations that make, buy, or sell products, which includes process and discrete manufacturing, retail, publishing, transportation and other industries. The focus is on supply chain reengineering, sales force automation, data warehousing, and IT strategy for large product-driven companies.
- **Financial Services**—Serves capital markets and the banking and insurance industries.
- **Call Center**—Is vertically focused on customer service initiatives in the financial, health care, technology and manufacturing industries.
- **Telecommunications**—Provides management consulting and systems integration services, call center, and electronic commerce experience to telecommunications companies.
- **Managed Health Care**—Serves health insurers, hospitals, clinics, and HMOs.
- **Enterprise Applications**—Serves all TSC vertical markets to provide clients with third-party applications software selection and implementation.

International Consulting and Systems Integration includes Europe, Latin America, and Canada.

Strategic and Complementary Businesses includes the following practice areas:

- *McLaughlin & Associates*—Provides high-end strategic consulting
- *Change & Learning Technologies*—Provides change management services, customized education and training programs, and multimedia services
- This unit will also include other acquisitions to be announced.

TSC also has an Infrastructure Support Group to facilitate local decision-making and the autonomy of the practice areas and project managers.

In addition to its headquarters in Chicago, TSC has field offices in Atlanta, Dallas, Los Angeles, New York, Philadelphia, Mexico City (Mexico), Bogota (Columbia), Toronto (Canada), and London (England).

TSC's key executives are summarized below:

TSC Key Executives

Name	Title
William H. Waltrip	Chairman
John T. Kohler	President and CEO
Kelly D. Conway	EVP
Jack N. Hayden	EVP
James S. Carluccio	EVP
Michael J. McLaughlin	EVP
Martin T. Johnson	SVP and CFO

Company Strategy

TSC's strategy is to offer a full-range of strategic business, management, and information technology consulting services

and the resources necessary to successfully implement major systems projects that improve a client's profitability and have attractive internal rates of return.

Information technology consulting services are offered in key application areas within targeted vertical markets.

- This specialization enables TSC to offer application and industry expertise in attractive growth areas such as:
 - Customer relationship solutions
 - Call center and customer service reengineering
 - Electronic commerce
 - Sales process optimization
 - Risk management
 - Supply chain reengineering
 - Packaged software implementation
- TSC concentrates on large corporate projects because it believes that such projects offer maximum profit potential and represent one of the fastest growing areas of the systems consulting and integration market.
- Integral with TSC's information technology consulting work is management consulting in the process redesign and reengineering areas.

TSC's strategy emphasizes the importance of project management and industry-specific and application knowledge.

- TSC dedicates an experienced, senior level project manager (vice president) to manage the typical large project.

- TSC's professional staff have specialized application skills and industry knowledge that enhances their ability to understand the business objectives of their clients and to contribute to day-to-day operating efficiencies.
- This knowledge is important to developing computer systems, as well as redesigning and restructuring business processes.

Goals for fiscal 1997 include:

- More investment in regionalization by recruiting and marketing as close to targeted customers as possible
- Continued geographic expansion in Europe, Canada, and Latin America

- More focus in the key vertical markets where TSC's expertise is the strongest—technology, manufacturing, financial services, health care, and telecommunications
- More focus on being a full-service business and technology consultant to major corporations around the world

Financials

TSC's fiscal 1996 revenue reached \$97.6 million, a 48% increase over fiscal 1995 revenue of \$65.8 million. Net income rose 36%, from \$3.4 million in fiscal 1995 to \$4.6 million in fiscal 1996.

A five-year financial summary is shown below.

Technology Solutions Company Five-Year Financial Summary (\$ Thousands, except per-share data)

Item	Fiscal Year				
	5/96	5/95	5/94	5/93	5/92
Revenue	\$97,599	\$65,817	\$53,157	\$62,475	\$70,987
• Percent change from previous year	48%	24%	(15%)	(12%)	35%
Income (loss) before taxes	\$6,768	\$4,700	\$(811)	\$8,965	\$19,904
• Percent change from previous year	(a) 44%	*	(109%)	(55%)	38%
Net income	\$4,574	\$3,367	\$35	\$5,706	\$12,059
• Percent change from previous year	36%	(b) *	(99%)	(53%)	42%
Earnings per share (c)	\$0.30	\$0.24	\$0.00	\$0.31	\$0.67
• Percent change from previous year	25%	*	(100%)	(54%)	23%

* Not meaningful

(a) Includes one-time pretax charges for financial settlements relating to outstanding securities litigation and litigation involving the company's founders of \$2.3 million and \$0.9 million, respectively.

(b) Includes approximately \$1.6 million in pretax charges for agreements with former TSC executives, impacting net earnings by approximately \$0.9 million.

(c) Restated to reflect a 3-for-2 stock split in July 1996.

Revenue growth in fiscal 1996 was attributed to growth in engagements won in the areas of call center/customer service, electronic commerce, supply chain management and packaged software implementation. In addition, TSC has capitalized on business opportunities at many of the company's existing clients and is now working in multiple areas of its clients' organizations.

- During fiscal 1996, TSC served 94 clients, of whom 50 were new clients. Nine new clients were part of the company's international expansion program, which includes a profitable Mexican subsidiary, and offices in London and Toronto.
- During fiscal 1996, TSC achieved a 42% increase in billable hours, as well as a 2% increase in average hourly billing rates. The increase in billable hours is attributed to the high growth in the overall information technology professional services market, combined with TSC's fiscal 1996 increase in consulting staff and marketing efforts.

Revenue Analysis by Product/Service

Virtually 100% of TSC's revenue is derived from its systems integration and associated consulting services.

The company derives minimal revenue (\$595,000 in fiscal 1996) from software and hardware sales.

Interim Results

Revenue for the three months ending August 31, 1996 reached \$32.2 million, a 55% increase over \$20.7 million for the same period in 1995. Net income rose 84%, from \$1.16 million to more than \$2.1 million.

- During the quarter, the number of project managers increased to 88 from 72 on May 31, 1996. During the quarter, TSC managed 138 projects at 111 clients, including 39 new clients for the quarter.
- Domestic growth is primarily fueled by project work in enterprise applications and change and learning technologies, including computer-based training and multimedia technologies. Growth also came from call center and customer service reengineering, electronic commerce, and financial services capabilities.
- International revenue represented 15% of total revenue for the quarter. Strong growth came from Latin American (enterprise application solutions supporting large-scale implementation of third-party software packages) and European operations (call center and customer relationship service offerings).

Market Financials

TSC's fiscal 1996 revenue was derived approximately as follows:

Industry	Revenue (\$ Millions)	Percent of Total
Products (a)	\$29.0	29.7
Distribution	17.8	18.2
Financial Services	13.9	14.3
Services	13.5	13.9
Technology/ communications	12.8	13.1
Health care	10.3	10.6
Other	0.2	0.2
Total	\$97.6	100.0

(a) Includes discrete and process manufacturing and consumer packaged goods.

Geographic Markets

Virtually all of TSC's fiscal 1996 revenue was derived from the U.S.

TSC initiated its international expansion during fiscal 1996. During the first quarter of fiscal 1996, TSC opened an office in Mexico City initially to focus on implementing SAP products. TSC intends eventually to expand the focus of this office to include other TSC services and practice areas.

During fiscal 1996, TSC also opened an office in London to market in Europe the company's customer relationship call center services. These operations were expanded with the acquisition of Aspen.

In July 1996, TSC opened an office in Toronto (Canada) which supports TSC's efforts to expand its customer relationship call center business into the Canadian market.

In the fall of 1996, TSC opened an office in Bogota to provide enterprise application services.

Acquisitions

In May 1996, TSC acquired Aspen Consultancy, a U.K.-based call center consulting firm, for approximately \$1.6 million plus contingency payments based on future performance. The acquisition was accounted for as a purchase.

- Aspen provides consulting in call center strategy and integration services in call center, voice, and data architectures, and related communications technologies.
- Aspen's clients are concentrated in financial services and high technology and include such firms as Hewlett-Packard, Microsoft, British Airways, Financial

Times, Bouygues, and the Royal Bank of Scotland.

- Aspen had revenue of approximately \$2.4 million for the fiscal year ending March 31, 1996.
- The acquisition gives TSC a strong base of expertise in call center solutions and supports TSC's plans to develop a strong consulting business in Europe through its call center solutions.
- Aspen has become a wholly owned subsidiary of TSC Europe.

In May 1996, TSC acquired McLaughlin & Associates of Schaumburg (IL) for approximately \$2 million. The acquisition was accounted for as a purchase.

- McLaughlin & Associates, founded in 1992, provides business strategic planning, market research and analysis, new venture growth services, product and distribution channel planning, and organizational restructuring for computer, telecommunications, software, and services firms. McLaughlin's strategy clients include IBM, AT&T, GTE, Motorola, Digital, and most of the Bell operating companies.
- The acquisition expands TSC's IT strategy consulting services to include strategic business consulting services and gives TSC deeper skills in the telecommunications market.
- McLaughlin now operates as a division of TSC within the Strategic and Complementary Businesses unit.

Employees

As of May 31, 1996, TSC had a total staff (including U.S. practice areas, Mexico,

Europe, and Infrastructure) of 622, including 68 in the Infrastructure support group.

Professional staff (excluding infrastructure) is segmented as follows:

Vice Presidents	14%
Senior Principals	19%
Principals	29%
Senior Consultants	21%
Consultants	12%
Associate Consultants	<u>5%</u>
	100%

TSC currently has 737 employees worldwide.

Key Products and Services

TSC provides a range of information technology and strategic business and management consulting services to its clients.

Information technology services include a range of systems integration and consulting professional services and include:

- Identification of areas of a client's business that can benefit from computer technology
- Feasibility studies
- Business case justification
- Business process redesign and reengineering
- Benchmarking and best practices
- Project management
- Architecture
- Logical and physical systems design

- Hardware and software selection
- Programming
- Implementation
- Change management
- Education and training
- Benefits realization

Strategic business and management consulting services include:

- Business strategic planning
- Market research and analysis
- New venture growth services
- Product and distribution channel planning
- Organizational restructuring services

TSC generally bills for project work on a time-and-materials basis. The size of the team of TSC's professional staff assigned to a particular project varies depending on the size of the project and the stage of implementation. TSC's professional staff assigned to a project is billed out at various rates, depending on the level of expertise of each individual.

One way in which TSC believes that it differentiates itself in the business and technology consulting market is through its business case justification process.

- TSC likes to start each project—regardless of practice area—with a business case justification that clearly spells out the business benefits that will result from the systems investment, along with various financial measurements of the benefits, including internal rate of return.

- The business case analyzes the client's current business objectives, operational structure, and systems architecture, evaluating which areas will bring the greatest return on the client's investment.
- During the process, TSC educates the client about relevant technological options and recommends how the client can best employ the technology to meet its objectives.

TSC's project management model leverages the expertise of TSC's staff in partnership with the client to build a technology solution. In a typical TSC project, a TSC vice president averaging 23 years of experience serves as project manager. Working with this individual are 10 experienced consultants averaging 18 years of experience to create the foundation project team, which is then completed by pairing with the client's staff.

TSC has a range of technical skills in the following technologies:

- Client/server
- Telecommunications
- Relational database management
- Voice/data integration
- Data/information warehousing
- Image processing
- Intelligent workstations
- Network integration
- Expert systems
- Object-oriented strategies

A summary of services by practice area follows:

Products

TSC's largest practice area, the Products practice area provides systems and business consulting services to companies in the packaged goods, pharmaceuticals, health

care, retail, wholesale, mail order, engineering, commercial manufacturing, transportation/logistics, and textile and apparel. Characteristics of these clients include a large customer base, an extensive product line, significant transaction processing loads, and large numbers (hundreds of thousands) of remote locations and staff to support.

- Typically, TSC works in the operational areas of the client company that have the greatest business and competitive impact, such as customer service, order processing, inventory and production management, pricing and promotions, transportation, and logistics.
- The Products practice area is focused on project work in the electronic commerce, supply chain reengineering, order entry, inventory management, distribution/logistics, sales process optimization, and direct marketing areas.

Financial Services

Also one of TSC's most well-established practices, Financial Services serves capital markets and the banking and insurance industries.

This practice area is focused on defining and implementing systems for financial institutions in three core service areas:

- Investment management systems used by portfolio managers, traders, and client relationship personnel to improve asset returns and customer service
- Risk management systems used by banking and corporate treasury for asset/liability management, to measure and hedge interest rate, currency, and commodity income and value risk

- Sales force automation systems used by sales managers and sales persons to achieve higher productivity from sales and target marketing.
- In addition, the practice area has experience in implementing real-time global trading and back office applications and supporting executive information systems.

Call Center

The Call Center practice area implements customer relationship call center projects and focuses on companies involved in consumer products, health care, telecommunications, high technology, financial services, media (including publishers and advertisers), and direct marketing.

Projects in the Call Center practice area typically include the evaluation of current call center operations, benchmarking and best practices analysis, system design and architecture, and implementation involving a variety of hardware, software, and technologies, including the integration of voice and data technology, artificial intelligence, imaging, client/server, and desktop tools.

The practice area targets firms with inbound/outbound call centers or telemarketing centers that provide such functions as sales, service, technical support, and customer inquiry.

Managed Health Care

This practice area was established in fiscal 1995 to serve health insurers, hospitals, clinics and HMOs.

The Managed Health Care practice areas concentrates on developing systems for

patient care, preventative care, and the control of specialist and hospital expenses.

This practice area can also provide workload and technology evaluation and consulting services to clients seeking acquisitions in the health care area.

Telecommunications

This practice area helps telecommunications companies enhance their customer relationship strategies in a more competitive, deregulated environment, where customer service and product integration will become key differentiators.

Enterprise Applications

This practice area provides clients with third-party packaged software selection and implementation. The group has special teams devoted to the implementation of SAP, PeopleSoft, and Baan.

This practice area focuses on commercial manufacturers, engineering companies, health care, financial services, distribution and logistics companies, aerospace and defense contractors, and other firms choosing to install an application software package developed by a third-party vendor.

McLaughlin & Associates

This practice area provides high-end strategic consulting services primarily to companies in the computer, telecommunications, software, and services industries. Clients have included IBM, AT&T, GTE, Motorola, Digital, and many of the regional Bell operating companies.

Change & Learning Technologies

This practice area provides change management, customized education and training services, and multimedia services.

Clients

Clients have included AT&T, Aetna, Borden, Book-of-the-Month Club, Chicago Board Options Exchange, Cisco Systems, ConAgra, The Equitable, Fidelity Investments, First Union Corporation, GE Aircraft Engine, Georgia-Pacific, Goldman Sachs & Co., Kidder Peabody, Pepsi-Cola Company, Pfizer Pharmaceuticals, Ralston Purina Company, Rockwell, Square D, and Whirlpool Corporation.

Marketing and Sales

TSC markets its services through an integrated marketing program.

Alliances

In March 1996, TSC was chosen by Baan USA as an International Americas Partner for the installation of Baan's ERP software. TSC is working closely with Baan on several customer implementations in the electronic and warehouse distribution industries. TSC has 40 trained and certified Baan professionals.

In May 1995, TSC became a SAP Alliance Partner.

In December 1993, TSC became a PeopleSoft Implementation Partner.

Although TSC is not currently involved in the sale or resale of hardware, it has in the past, on occasion, acted as a value-added reseller for Hewlett-Packard, Digital, Sun Microsystems, and Tandem Computers.

Competitors

TSC's major competitors in the strategic business and management consulting market include Andersen Consulting, Booz Allen & Hamilton, McKinsey & Co., and CSC Index.

Competitors in the information technology and systems consulting market include Andersen Consulting, American Management Systems, Booz Allen & Hamilton, Cambridge Technology Partners, Computer Sciences Corporation, Coopers & Lybrand, Deloitte & Touche, EDS, Ernst & Young, IBM, KPMG Peat Marwick, and Price Waterhouse.

INPUT Assessment

TSC's strengths include:

- Technology depth and expertise in key business applications
- Scope of services from vision development through implementation and benefits realization
- Project management skills tested in complex large-scale integration engagements
- Model of delivery that relies on full-time, on-site project management in small teams of very senior people averaging 18 years of experience
- Commitment to partnering with the client to co-manage the project
- Knowledge and skills transfer to ensure successful implementation

Challenges over the coming year include:

- Assimilating acquisitions into company operations
- Continued expansion internationally
- Continuing to attract and retain top talent in the industry

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1996

Telekurs Group

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Executive Vice President: Dr. Georg Kramer
Status: Public
Number of Employees (Group): 1,595
Revenue (FYE 31-12-95) (Group): SFr 531.5 million

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Key Points

- The leading Swiss vendor of financial electronic information and processing services for the banking community
- Jointly owned by over 300 Swiss financial institutions
- Telekurs reported moderate revenues and very small profits for 1995
- New infrastructure for all Telekurs services is based on industry standards
- The new holding structure implemented in the beginning of 1996 consists of Telekurs Logistik AG, Telekurs Finanz-informationen AG, Telekurs Payserv AG, EUROPAY S.A. and the foreign subsidiaries.

Company Description

Telekurs is a major Swiss-owned electronic information services vendor, selling on-line financial information, trading systems and related professional services.

The company is owned by 300 banks and stock exchanges, primarily Swiss, to which it also provides processing services. It sells its electronic information services to European banking centers and is also responsible for the Swiss computer Centre where all payment transfers between Swiss banks are executed.

At the end of 1991, Telekurs' credit card processing and administrative division was set up as a wholly owned subsidiary, Eurocard (Switzerland) S.A.

At the beginning of 1993 Telekurs set up TAPS (the Telekurs Payment Systems Committee). TAPS' brief is to draft the policy for adoption by Swiss banks on national and international payment systems and to identify joint solutions. It also supervises the various working parties and commissions set up by the banks in the field of payment systems. TAPS' aims to maximize the efficiency of payment methods and systems; thereby *"reinforcing Switzerland's international standing as a financial Centre"*.

Operations and Structure

Since the beginning of 1996, Telekurs Group consists of the new companies Telekurs Logistik AG, Telekurs Finanzinformationen AG, Telekurs Payserv AG, the foreign subsidiaries and EUROPAY (Switzerland) S.A., formerly known as Eurocard (Switzerland) S.A.

At the end of 1995, Telekurs founded a new subsidiary in Prague. At the same time, the Telekurs bureau in Milan was restructured in another new subsidiary, Telekurs (Italia).

The old subsidiary Telekurs (France) S.A.R.L. was sold to FININFO — a partner of Telekurs since 1994 — in exchange of a minority stake of FININFO. This agreement means that Telekurs will be able to offer its products in FININFO's markets France, Spain and Portugal. FININFO will have the same opportunity to reach the German speaking countries.

Since November 1995, Telekurs has participated in an EU-project for a secure electronic marketplace over the Internet.

The new organizational structure of Telekurs AG is shown in Exhibit 1.

Exhibit 2 lists Telekurs Group's subsidiaries.

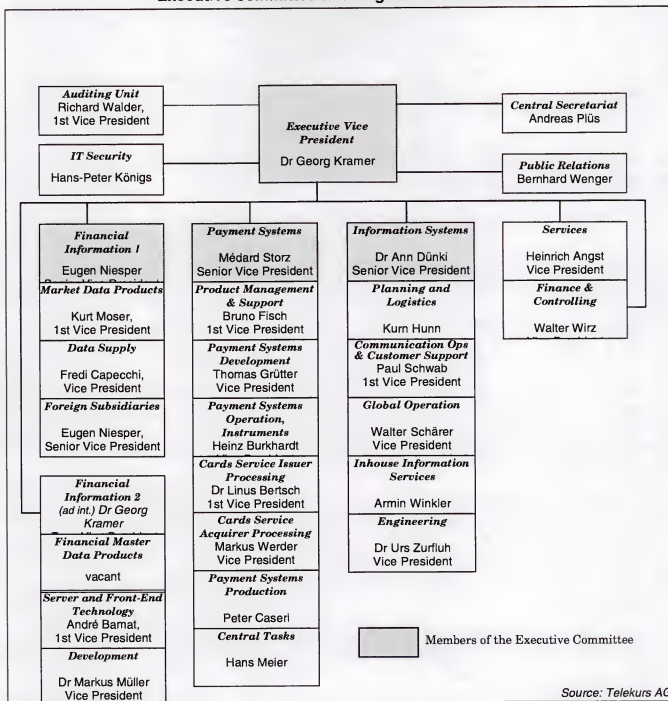
Exhibit 2

Telekurs Group Subsidiaries, 1995

Subsidiary	Equity held
Telekurs (Germany) GmbH, Frankfurt	100%
Telekurs (Italia)	100%
Telekurs (UK) Ltd. London	100%
Telekurs (Luxembourg) S.A. Luxembourg	100%
Telekurs (Netherlands) B.V. Amsterdam	100%
Telekurs (North America) Inc. Stamford CT	100%
Telekurs (Japan) Ltd. Tokyo	100%
Telekurs (Singapore) Pte Ltd. Singapore	100%
EUROPAY (Switzerland) SA. Wallisellen	100%
Telekurs (Ceska Republika)	100%

Exhibit 1

Telekurs Group Executive committee and Organizational Structure



Company Strategy

Telekurs is going through a period of change. It has been realigning its operations to market-led criteria established by the company as strategic to its future development. Changes to Telekurs' offerings were first instigated in 1991 when it developed its new strategy and these have continued over the last 4 years.

The overall aims of Telekurs' strategy have been to reduce communications costs, modernize existing infrastructures, incorporate new standard technologies and create a unified platform for all Telekurs services.

The implementation of the new strategy started in the Financial Information Division, where development of new products based on leading-edge technology was initiated, with the aim of replacing existing services over the following few years.

Strategic realignment has also been reflected in new services and areas of business. Telekurs has identified EDI as a development area for its business and has put in place its own EDI infrastructure.

In September 1996 Telekurs Payserv AG formed an alliance with the network service provider Global One. This new co-operation enables Telekurs to offer its customers access to EDI services from its subsidiary Telekurs Payserv AG. Telekurs intends to expand this service globally.

The organizational changes relating to the spin-off of Eurocard (Switzerland) S.A., which was completed at the end of 1991, prompted Telekurs to develop a new card service profit Centre. This has since become a major growth area for the company.

In 1995, due to the growing popularity of plastic money, EUROPAY S.A. was able to

strengthen its position as the leading Swiss supplier of card-based payment instruments.

Projects in the Payment Systems Division have been focused on refining and improving existing products. Telekurs has aimed to improve efficiency and thereby minimize price adjustments to the classical interbank services.

Financial Results

A four-year financial summary is shown in Exhibit 3.

Exhibit 3

Telekurs Group Four-year Financial Summary (FYE 31.12) SFr million

	1992	1993	1994	1995
Revenue	505.1	525.9	549.8	531.5
Annual Growth Rate		4.1%	4.5%	(3.4%)
Profit after tax	8.4	19	25	22.6
Employees	1,783	1,760	1,694	1,595
Revenue per Employee	0.283	0.298	0.324	0.333

Source: Telekurs

In 1995, the Group including foreign subsidiaries reported consolidated revenues of SFr 531.5 million (down 3.4% on 1994) with after tax profits of SFr 22.6 millions (down 10% on 1994). The two main reasons for the decline were a decrease in revenues at Financial Information Division and a disposal of products as part of refocusing the business. As part of the restructuring exercise, Telekurs sold part of its UK subsidiary and spun off a division of the US business through a management buyout.

Between 1992 and 1995, Telekurs' revenues showed stable growth with the exception of last year's reduction. The Payment Systems Division and the EUROPAY S.A. earned SFr

306 million of the consolidated revenue in 1995. The Financial Information division reached revenues of SFr 215.8 million and SFr 9.7 million were generated by the remaining divisions.

At SFr 460.9 million (466.1 million), operating expenses in 1995 were slightly down from the 1994 figure of SFr 466.1 million. Higher costs for development of new payment systems and a first-time charge for non-refundable VAT were offset by reduced unit costs and lower depreciation. Exhibit 4 shows Telekurs' costs listed by categories.

Exhibit 4

**Telekurs Group
Cost Structure, 1995**

Category	SFr Millions	Share
Personnel	204.9	45%
Transmission Costs	23	5%
Data Acquisition	46	10%
Travel & Entertainment Expenses	4.5	1%
Advertising	23	5%
Other Operating Expenses	97.8	22%
Depreciation	61.7	14%
Total Operating Expenses	460.9	100%

(Percentages rounded)

Source: Telekurs

Market Analysis

Exhibits 5 to 7 provide analyses of Telekurs' 1995 revenues by product, geography, industry and delivery mode.

Exhibit 5

**Telekurs Group
1995 Market Analysis by Reported
Product Group**

Product Group	Revenue (SFr Millions)	Share
Financial Information	215.8	40.6%
Payment Systems	306	57.6%
Miscellaneous Services	9.7	1.8%
Total	531.5	100%

(Percentages rounded)

Source: Telekurs

Exhibit 6

**Telekurs Group
1995 Market Analysis by Industry,
European Software and Services
(\$ millions)**

Industry Sectors	Revenues	Share
Banking and Finance	283	80%
Insurance	50	14%
Business Services	21	6%
Total Software and Services	354	100

(Percentages rounded)

Source: INPUT Estimates

Exhibit 7

**Telekurs Group
1995 Market Analysis by Delivery Mode,
European Software and Services
(\$ Millions)**

Delivery Mode	Revenues	Share
Professional Services	18	5%
Systems Operations	3	1%
Network Services	156	44%
Processing Services	177	50%
Total European Software & Services Revenues	354	100%

(Percentages rounded)

Source: INPUT Estimates

Geographic Markets

Exhibit 8 shows an estimated breakdown of the Telekurs Group's European revenues by country.

Exhibit 8

Telekurs Group Market Analysis by Country, European Software and Services 1995, (\$ Millions)

Country	Revenues	Share
France	14	4%
Germany	21	6%
UK	7	2%
Italy	7	2%
Belgium/Luxembourg	3	1%
Netherlands	10	3%
Switzerland	287	81%
Austria	1	<1%
Europe Balance	4	1%
Total Information Services	354	100%

(Percentages rounded)

Source: INPUT Estimates

Note: Telekurs also has subsidiaries in the US, Singapore and Japan

Employees

In 1995, Telekurs employed on average 1,595 staff which was a slight reduction from 1994. A breakdown of employees by job activity is shown in Exhibit 9.

Exhibit 9

Telekurs Group's Employee Mix, 1995

Job Activity	Share
Executives (line management/specialist staff)	18%
Sales and Marketing	2%
Development	15%
Production and Technical Staff	25%
Operational Services	29.5%
Central Administration	7%
Other	3%
Total	100%

Source: Telekurs

Key Products and Services

The main products and services offered by Telekurs are described below:

Financial Information Division

- **INVESTDATA** – a real-time information system that allows access to prices, lists and news from 168 international stock exchanges, financial markets and market makers. It handles around 1 million inquiries per day with 23,000 active connections.
- **VALORDATA** – a service for securities administration (350 customers).
- **Telekurs Digital Feed (TDF)** – real-time information (over 150 connections) in standardized format from a wide range of sources on securities, indices, options, futures, commodities, money markets and foreign exchange notes, precious metals and business news.
- **INVESTVISION** – a television-based broadcast service jointly developed with Swiss Teletext, providing continuously updated price information on over 6,000 securities and with over 300 connections.

- **FIDM (Financial Instrument Data Model)** – a new development (jointly with Zurich consultants ECOFIN) which will provide the basis for two new services, Market Data Feed (MDF) and Valor Data Feed (VDF). MDF will eventually replace TDF.
- **Data Collection System (DCS)** – a development commissioned in 1993 in Zurich, New York, Frankfurt, London and Singapore to collect and standardize market information from all over the world before making it available to customers.
- **New products being developed include:** Financial Information Maintenance System (FIPS), Financial Information Management System (FIMS) and FINVEST.

Payment Systems Division

- **SIC (Swiss Interbank Clearing)** – automated settlement of payments between Swiss banks. Over 88 million transactions were processed in 1994, with 900,000 on peak days.
- **Data Carrier exchange (DTA) and Direct debiting (LSV)** – paperless transaction processing and direct payment clearing for bank customers directly via the computer Centre at Telekurs. (DTA handles salary and commercial payments while LSV automated direct debits.) Over 80 million transactions were handled in 1995. The DTA is since September 1995 powered up with the new version of the software PayCom 3.0 for Windows, which provides a better security level.
- **Standard Swiss Cheques** – administration of Eurocheque activities, including cash dispenser and direct debits.
- **BANCOMAT/Card Services** – a full service for various credit and customer card issuers, including Eurocard. The card

service facility includes authorization and collection of cards and processing of transactions.

- **ec-DIRECT** – EFT/POS service providing automated fuel payment at more than 3,000 petrol stations and with over 17 million transactions in 1994.

Information Technology Division

The division operates computer centers at Telekurs HQ in Zurich and in Wallisellen, coupled by a high-speed link. Services are offered in the following areas.

- **Networks and Data communications**
- **Inter Enterprise Services**
- **Facilities Management.**

Networks and Data Communications:

Telekurs operates two high performance networks, which together transmit more than 900 million messages a year. These form the core of a system that gathers data from the world's business centers, distributes financial information (for example through INVESTDATA) and handles payment transactions (for example SIC).

TELOSnet, an X.25 packet switching network, supplements the communications facilities and value added network services offered by Telekurs.

Inter Enterprise Services:

This service provides electronic exchange of business information between companies and banks.

Facilities Management:

Telekurs provides facilities management services. It operates the Ring Information System (RIS) and Transaction Processing (AV) services on behalf of the Swiss Stock Exchanges.

INPUT Assessment

Telekurs strengths include:

- Ownership
- Network
- Client base.

Telekurs possesses a major strength in its ownership. It is an unusual company in that its shareholders comprise 300 banks and exchanges. Telekurs therefore has strong financial backing and support.

Telekurs has an impressive client base. It has a strong set of 'blue chip' customers. It provides real-time information services to the European banking and figure sectors, many of whom are its shareholders, and to the insurance sector.

Telekurs has a further strength in its extensive networks.

Whilst one of Telekurs' strengths lies in its enviable client base, its dependency on the financial sector can also be perceived as a weakness. The recession has continued to stifle activity in many financial markets upon which the company depends and should this continue into the longer term, Telekurs could have difficulty in maintaining its revenues and profitability.

Overall, volumes of business have continued to increase. The Executive Committee, which has been headed since June 1991 by Dr Georg Kramer, has succeeded in substantially reducing total costs through rationalization, restructuring and other economy measures.

In accordance with its new market-led strategy, major product upgrades and additions have been developed and introduced in order to meet existing clients' needs for services in the interim.

Under the new strategy, the INVESTDATA, VALORDATA and TELEKURS Digital Feed (TDF) products are being progressively superseded by new digital data feeds.

Within the financial sector, Telekurs has been successful in diversifying into and building up skills in other areas outside its original activity of servicing the banking sector.

The main challenge facing Telekurs continues to be to regain and/or retain revenue growth in a market that continues to see turbulent business activity and displays few signs of improvement in the foreseeable future.

However, the company is strongly placed with an impressive client base and could be argued to have virtually a captive market in its home territory.

COMPANY
PROFILE**TELINK SYSTEMS, INC.****(formerly EDI, Inc.)**

19650 Club House Road

Suite 202

Gaithersburg, MD 20879

Phone: (301) 670-0811

Fax: (301) 590-9284

President:

John Wilburn

Status:

Private Company

Total Employees:

22

Total Revenue:

\$2,000,000*

Fiscal Year End:

12/31/92

* INPUT estimate

Key Points

- In August 1993, EDI, Inc. changed its name to TELINK Systems, Inc. to more closely identify the company with its successful product line.
- TELINK Systems was the first company to release a microcomputer-based EDI translator. The company has since expanded its TELINK product family to include solutions for UNIX and Tandem minicomputers and mainframes, as well as several specialized products for microcomputers.
- In June 1993, John Wilburn was appointed president of the company. Mr. Wilburn previously was a consultant to the company and later the director of marketing.

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**Company
Description**

TELINK Systems markets and supports its TELINK translation software products worldwide. More than 3,000 sites have installed TELINK systems.

TELINK Systems was formed in January 1982 as EDI, Inc. by individuals active in the Transportation Data Coordinating Committee, the industry trade association most responsible for the promotion of electronic data interchange (EDI) concepts. The company's goal was to develop and market EDI software.

- During 1983 and 1984, the company installed six pilot systems under the sponsorship of the National American Wholesale Grocers Association (NAWGA). These initial installations served as beta test sites for product refinement and further development.
- TELINK Systems formally entered the EDI market in January 1985 with the introduction of TELINK.
- During 1985 and 1986, TELINK Systems developed applications for the transportation and banking industries and also for the Department of Defense. The company has since expanded its markets to other industries and internationally.
- In 1988, TELINK/Tandem was released for Tandem NonStop systems using the Guardian operating system.
- In 1989, TELINK Systems developed a system to process the 602 Tariff transaction set for the Military Traffic Management Command (MTMC). The project included an artificial intelligence capability to verify the data and act accordingly.
- During 1990, TELINK/osa (open systems architecture) was released for the Unisys 6000 series of UNIX-based systems. TELINK/osa was interfaced with EadIPlus mapping software from Unisys.
- In 1990, software tools were developed to enhance the quality control for producing and updating TELINK systems.
- In 1992, TELINK/sa, a "cafeteria style" system, was announced for the standalone user.

Strategy

TELINK Systems' strategy is to make its TELINK product simpler, more user friendly, and capable of being bundled with other application packages.

Financials

INPUT estimates TELINK Systems' 1992 revenue was \$2 million, a 25% increase over 1991 revenue of \$1.6 million.

Market Financials

TELINK Systems markets its software products across many industries, including banking, government, grocery, discrete and process manufacturing, retail trade, transportation, and warehousing.

Geographic Markets

Approximately 90% of TELINK Systems' revenue is derived from the U.S. and the remaining 10% from Canada, Europe, and the Pacific Rim.

Employees

As of August 1993, TELINK Systems had 22 employees, segmented as follows:

Marketing and sales	3
Customer support	2
Research and development	13
General and administrative	4
	22

Key Products and Services

TELINK Systems' principal product, TELINK/micro, is microcomputer-based and supports ANSI X12, UCS, WINS, and TDCC (air, motor, ocean, rail) standards.

- Hardware/software and communications requirements are as follows:
 - Hardware/software: IBM PC AT or compatible, 640 K memory, MS-DOS 3.1 or later
 - Communications: 2,400/4,800/9,600 baud autodial/autoanswer bisynchronous, 1,200 to 19,200 baud autodial/autoanswer asynchronous, X.32 (dial-up X.25)
- TELINK/micro functions include:
 - Menu-driven operation
 - Print routines
 - By-product reports
 - Data control features
 - Archiving
 - Supporting utility routines

- Recovery (in the event of power loss)
 - User control over specifying the system configuration
 - Automatic sequencing of various functions in an unattended mode
 - Error-checking functions
 - Security provisions
 - Resiliency and recovery
 - Automatic unattended operation based on a calendar and clock provided with TELINK and set by the user
 - System configuration module for adapting TELINK to the user environment.
 - User-defined menu module to integrate TELINK with other user software
- TELINK/micro is priced at \$1,250, plus \$300 per transaction set and \$450 per communications interface. The annual maintenance fee is 18% of the current purchase price for standards, software, documentation updates, and hotline services.

TELINK/sa has all of the features of TELINK/micro except for a host interface. TELINK/sa is available for a core price of \$450, plus \$300 per transaction set and \$450 per communication interface.

Tandem TELINK, introduced in May 1988, is a mainframe software product based on Tandem architecture.

In March 1991, TELINK Systems released TELINK/osa, which has been designed for UNIX environments and is now available on the Unisys U6000 series system.

During 1991, TELINK Systems introduced TELINK/602, a specialized product designed to help carriers automate the process of generating a Tender Offer for the U.S. Military Traffic Management Command (MTMC). TELINK/602 uses artificial intelligence to assure data accuracy and to ensure compliance with the specifications of MTMC.

Marketing & Sales

The company sells directly to users and through a worldwide network of value-added resellers, systems integrators, and distributors, including E.G. Systems House, J. Computer Systems, and Foxware.

Alliances

TELINK Systems is a marketing associate of Unisys Corporation.

**COMPANY
PROFILE**

**TDS HEALTHCARE SYSTEMS
CORPORATION**

200 Ashford Center North
Atlanta, GA 30338
Phone: (404) 847-5000
Fax: (404) 847-5700

Chairman:	John J. Whitehead
President:	Eugene Santa Cattarina
Status:	Subsidiary
Parent:	ALLTEL Corporation
Total Employees:	550
Total Revenue:	\$75,000,000*
Fiscal Year End	12/31/92

*INPUT estimate

Key Points

- TDS Healthcare Systems Corporation (TDS) faces a significant challenge in moving its products from mainframe-based turnkey systems to the open distributed architecture increasingly requested in health care markets.
- ALLTEL corporation announced on August 31, 1993 that it had signed a definitive agreement to acquire TDS Healthcare Systems Corp. TDS will be operated under Systematics Healthcare Services, Inc. a newly formed subsidiary of ALLTEL's Systematics Information Services. Under the terms of the agreement, which will be accounted for as a pooling of interests, ALLTEL will exchange 2.0 million ALLTEL common shares for all outstanding shares of TDS' capital stock. Pending receipt of necessary approvals, ALLTEL expects to complete the acquisition later this year.
- TDS is well positioned with its design of a single, integrated Permanent Patient Record (PPR) to address critical patient record issues in the health care market.
- TDS products have high user satisfaction with their current functionality and efficiency in dealing with patient information.

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Company Description

TDS Healthcare Systems Corporation (TDS) provides application software products and processing services for health care information management to hospitals.

- TDS originated in 1964 as the health care information services division of Lockheed Corp., which was purchased by Technicon Corporation in 1971 and renamed Technicon Data Systems. In 1980, the company was acquired by Revlon Corporation.
- In 1985, Revlon was acquired in a leveraged buy out by Pantry Pride, which began efforts to sell individual operating units.
- In 1986, Technicon Data Systems was purchased from Pantry Pride by John J. Whitehead. The company was renamed and officially launched as TDS Healthcare Systems Corporation in 1987. The acquisition and financing was handled entirely by the Whitehead family.

Operations/ Structure

TDS principal offices are as follows:

- TDS Corporate and North American Division headquarters are located in Atlanta.
- A research and development facility is located in San Jose (CA).
- The Federal Systems Division is headquartered in Rockville (MD).
- The International Division is headquartered in London.

Additional offices are located throughout the U.S., Europe, and in Canada. TDS markets its products through a direct sales force located in the U.S., Europe, and Canada.

Strategy

TDS plans to aggressively pursue its expansion in Europe. Currently TDS products are available in English and French versions.

Financials

INPUT estimates TDS' 1992 revenue was approximately \$75 million.

Competition

Major competitors include Shared Medical Systems, HBO & Company, IBAX Healthcare, and First Data Corporation.

Key Products and Services

INPUT estimates TDS' 1992 revenue was derived approximately as follows:

Software product licenses	86%
Processing services	5%
Hardware maintenance services	9%
	100%

TDS 7000 Series^R

The TDS 7000 Series is TDS' family of health care information systems with full functional support for physicians, nurses, and other clinicians, based on a single, integrated Permanent Patient Record.

- The Permanent Patient Record can maintain as many as 16 million individual, lifetime records, integrating information from inpatient and outpatient activities. This information can be accessed on-line in real-time from anywhere in a hospital or health care delivery system.
- All models in the TDS 7000 Series include four fully integrated modules as follows:
 - The Healthcare Module includes the Permanent Patient Record and is the core of the entire information system. It is a data collection, distribution, and management module that captures all patient care information at the point of care.
 - The Health Management Module includes an Advanced Medical Records Application and a Patient Accounting Application that automates all hospital billing and collections functions.
 - The General Financial Module automates and integrates financial applications, including general ledger, asset management, budgeting, inventory, payables, purchasing, and human resources.
 - The Decision Support Module provides analytical tools and modeling capabilities that include cost accounting, case mix, budgeting, and productivity analysis.
- The TDS 7000 Series runs on IBM 43XX or 30XX series systems under VSE and MVS and supports IBM's SNA. The TDS 7000 Series is available in several models to clients as an in-house system or as a processing service.
- The Model 7800 is generally suited for 500+ bed facilities, multi-hospital groups, and organizations with large outpatient

volumes. The Model 7800 client licenses the system and can choose to process at the hospital's data center or contract for processing services from TDS.

- The Model 7600 is configured for medium-sized (generally 350-500 bed) facilities. The Model 7600 client licenses the system and can choose to process at the hospital's data center or contract for processing services from TDS.
- The Model 7400 is designed for small-to-medium-sized (generally 150-400 bed) facilities. This product is delivered on-line, real-time via remote processing from a TDS data center for a fixed monthly fee.
- The TDS 7000 Series was released in August 1990 as the successor to the TDS HealthCare 4000 System. TDS continues to support the TDS HealthCare 4000 System as its clients migrate to the TDS 7000 Series.
- TDS currently has its systems installed at 200+ client sites. Approximately 30% of TDS' clients currently run the system remotely-either from one of the TDS data centers, from commercial data centers, or from data centers established by individual users to support multiple sites.

TDS Services

TDS provides installation consulting services to assist customers throughout the implementation process, providing implementation teams, support and user training.

TDS will also provide systems operations on an outsourcing or remote basis from regionally located TDS data centers.

Clients

TDS has built a client base of more than 200 facilities that include university, community, specialty hospitals and multi hospital systems in the United States, Canada, the United Kingdom, and Continental Europe.

Industry Markets

Virtually all of TDS 1992 revenue was derived from community, university/teaching, and government hospitals and multihospital systems.

TDS will continue to expand its product offerings to meet the needs of all health care facility market segments.

**Geographic
Markets**

Approximately 90% of TDS 1992 revenue was derived from the U.S. and 10% from international sources.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1994

Terrano Corporation

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President & CEO: James A. Terrano
245 South 84th Street
Lincoln, NE 68510
Phone: (402) 483-7831
Fax: (402) 483-7846

Status:	Public
Employees:	86 (3/94)
Revenue:	\$ 10,213,224
Fiscal Year End:	12/31/93

Key Points

- Terrano Corporation markets and supports the IBM AS/400-based ILS-5 Laboratory Information System to the health care industry.
- The company's financial performance was up sharply in 1993. Revenues reached a new all-time high of \$10.2 million and earnings improved by nearly \$2.5 million.
- With the discontinuation of Prime Computer's operations in 1992, Terrano

reported a \$2 million noncash charge to its 1992 results. Prime had been one of Terrano's principal computer hardware suppliers.

- Terrano began converting its Prime client base to the AS/400 platform in 1993 and plans to continue this conversion for the next two or three years.
- Joint marketing agreements with GTE Health Systems and IBAX Healthcare Systems contributed significantly to Terrano's revenues in 1993. Fourteen ILS-5 systems were sold under these agreements in 1993.
- In March 1994, Terrano announced a joint marketing agreement with First

Coast Systems, that sells its APaCS Hospital Information System on the AS/400 platform.

Company Description

Terrano Corporation, founded in 1977, develops, markets and supports integrated IBM AS/400-based turnkey systems for clinical laboratory applications to the health care industry. Terrano is a value-added reseller for IBM.

The company's flagship product, the ILS-5 Clinical Laboratory Information System, was originally developed for Prime 50-Series computers. In 1990, a version of the ILS-5 was released for the AS/400.

- Although Prime Computer has discontinued its operations (including the production and sales of its 50-Series hardware), Terrano continues to provide software support services to all its Prime-based ILS-5 clients while it carries out its plan to convert these systems to the AS/400 platform. Hardware maintenance services for Prime-based ILS-5 systems are provided by Computervision.
- Terrano has 125 ILS-5 client sites, including 71 Prime 50-Series-based systems and 54 AS/400-based systems.

Strategy

Terrano has developed a transition plan for its Prime client base that makes the transfer to the AS/400 platform a much more cost-effective alternative for the client than purchasing a new laboratory information system from another vendor.

- Terrano management considers the preservation of its existing client base (from which the company derived more than 40% of its 1993 revenues) to be a very high priority.
- Terrano anticipates that most of its Prime clients will be converted to the IBM AS/400 platform within the next three years.

Terrano's single-version philosophy protects clients' investments in technology. The ILS-5 is a single version product. Each client is provided a new version of the software annually, and every client always has the most up-to-date software version available.

Price declines for AS/400 systems have allowed Terrano to offer a more comprehensive laboratory information system to smaller hospitals that most of the PC-based vendors at comparable prices. While Terrano currently sells its systems to a range of clients, its growth strategy includes increasing sales and marketing efforts to smaller hospitals (less than 250 beds). In addition, the company will continue to seek license relationships with multifacility health care providers.

In order to further expand its marketing opportunities, Terrano is forming alliances with other vendors in the health care industry that offer products that are complimentary to the ILS-5.

- Examples of these types of products include information systems for other ancillary departments within the hospital such as pharmacy, medical records or nursing and large hospital

information systems that do not feature a laboratory system product.

- Terrano has successfully completed and installed interfaces to most major information systems and also offers interfaces to instruments and reference laboratories.

Financials

Terrano's 1993 revenue increased nearly 17% to \$10.2 million. Net income reached \$691,000, compared to net losses of nearly \$1.8 million for 1992, which included a \$2

million provision for losses from the discontinuance of its Prime hardware platform.

- The majority of the \$2 million loss is for write-offs of the unamortized portion of capitalized software development for the Prime product line. It also includes write-offs of most of Terrano's internal Prime hardware and estimated future costs associated with the discontinuance of this product line.
- A five-year financial summary follows:

Terrano Corporation
Five-Year Financial Summary
(\$ Thousands, except per share data)

Item	Fiscal Year				
	1993	1992	1991	1990	1989
Revenue	\$12,213	\$8,754	\$8,687	\$6,606	\$4,945
• Percent change from previous year	17%	1%	32%	34%	35%
Income (loss) before taxes	\$691	\$(1,776)	\$1,077	\$820	\$378
• Percent change from previous year	139%	(a) (265%)	31%	117%	17%
Net income (loss)	\$691	\$(1,776)	\$1,070	\$814	\$378
• Percent change from previous year	139%	(266%)	31%	115%	17%
Earnings (loss) per share	\$0.13	\$(0.33)	\$0.22	\$0.17	\$0.08
• Percent change from previous year	139%	(250%)	29%	113%	--

(a) Includes a \$2 million loss from the discontinued Prime product line.

Interim Results: Revenue for the three months ending March 31, 1994 were \$2.3 million, compared to nearly \$2.4 million for the same period in 1993. Net income was \$37,000, compared to \$147,000 for the same period a year ago. The company's first quarter is historically one of slowest periods.

Approximately 79% of Terrano's 1993 revenue was derived from turnkey system sales and 21% from software support and maintenance services.

- Equipment sales occur in most new system sales and when existing clients upgrade and/or add to their ILS-5

hardware configuration. While the majority of Terrano's clients purchase their hardware from Terrano, some purchase hardware from other distributors or directly from the manufacturer.

- Software license revenues occur with new system sales and when existing clients add application enhancement modules to their existing ILS-5 systems.
- A three-year summary of source of revenue follows:

Terrano Corporation
Three-Year Source of Revenue Summary
 (\$ Millions)

Product/Service	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Equipment sales	\$4.0	39%	\$3.7	42%	\$4.5	51%
Applications software licenses	4.1	40%	3.4	39%	2.8	33%
Software support and maintenance	2.1	21%	1.6	19%	1.4	16%
Total	\$10.2	100%	\$8.7	100%	\$8.7	100%

Revenue growth in 1993 was due to increased revenue from Terrano's existing client base for add-on hardware and software, plus revenue increases for software support and maintenance.

- Computer system equipment sales and support revenue increased 7% in 1993 to \$4 million. Nearly all hardware sales in 1993 were IBM and other peripheral hardware. Hardware sales have become a less significant component of total revenues because clients have the option to purchase their IBM hardware from Terrano, other IBM dealers or directly from IBM.

- Applications software license revenues increased 20% in 1993. Nearly all sales were for the AS/400 platform, though Terrano continues to sell some add-on software modules to its existing Prime client base.
- Software support and maintenance revenue increased 32% in 1993. Prime platform software support revenue increased by nearly 8% to \$1.5 million and AS/400 software support revenue increased 202% to \$608,000. As clients convert to AS/400 systems, support revenues from the Prime client base will level off and begin to decline.

Market Financials

One hundred percent of Terrano's 1993 revenue was derived from the medical industry.

Terrano's turnkey systems are installed in small rural community hospitals and large urban medical centers, as well as private reference laboratories, hospital-based reference laboratories, networked multihospital sites and group practice clinics.

One customer, Humana, contributed revenue of \$1 million (10% of total revenue) in 1993, \$2.2 million (26% of total revenue) in 1992 and \$3.4 million (39% of total revenue) in 1991. Humana has been a Terrano client since 1983.

- Terrano had a paid-up software license agreement with Humana that provided approximately \$650,000 of annual software license revenues during 1990, 1991 and 1992. The final payment was made in 1992.
- During 1993, Humana split its operations and transferred its contract interest with Terrano to Galen Healthcare, Inc., which subsequently merged with Columbia Healthcare Corporation.
- As a result of the merger, Terrano's ILS-5 system is presently installed at twenty-six Columbia hospitals on the Prime platform and six Columbia hospitals on the IBM AS/400 platform.
- Columbia intends to continue to purchase IBM AS/400 hardware and support services from Terrano for existing and new ILS-5 installations.

Geographic Markets

One hundred percent of Terrano's 1993 revenue was derived from the U.S.

Terrano currently has 125 client sites in 37 states.

Key Products and Services

The ILS-5 Laboratory System for clinical laboratories was first introduced in 1982. The system was designed to enhance a laboratory's capabilities throughout the entire process of ordering and testing as well as producing patient and management reports.

- The system provides the basis for all information handling needs of hospitals, reference laboratories and clinics to increase staff productivity and improve cost-effectiveness. It monitors and controls the flow of specimens through the laboratory, accesses necessary information when needed, interfaces to automated laboratory instruments and other information systems—ensuring integrity of information throughout the institution—and complies with all internal and external regulations.
- The primary applications supported include:
 - Admission
 - Discharge

- Transfer
 - Patient demographics
 - Order entry
 - Bar coding and specimen
 - Collections
 - Section management
 - Results entry
 - Quality control
 - Laboratory productivity
 - Risk management/quality assurance
 - Results inquiry and reporting
 - Service billing
- Optional modules include:
- Advanced microbiology
 - Laboratory management
 - Transfusion service manager
 - ANSIRS (Anatomical Surgical Information Retrieval System)
 - Remote user network
 - Client services
 - Distributed laboratory systems interface
 - Reference laboratory interface
 - Training/validation/testing system
 - Query and report writer
 - Hand-held collection devices.
- Although Terrano offers standard and optional features, operational characteristics of ILS-5 can be tailored to the specific needs of the client.
- The ILS-5 Laboratory System is installed at 125 client sites.

Terrano no longer actively markets but continues to support its ARIS (Advanced Radiology Information

System) for Prime 50 Series computers.

The installation of a new client site can take anywhere from three to nine months or longer, depending on the system configuration (hardware and software), the size and complexity of the client laboratory operation and the timing requirements of the laboratory client.

Software maintenance and support is available seven days a week, 24 hours a day from Terrano's Software Services Support Center. Hardware maintenance is provided directly by Computervision and IBM.

Clients

Terrano has 125 installations of its system.

Clients announced in 1994 include Roche Biomedical Laboratories (Burlington, NC), Cameron Memorial Community Hospital (Angola, IN), Katherine Shaw Bethea Hospital (Dixon, IL) and Morgan County Memorial Hospital (Martinsville, IN).

Marketing and Sales

Terrano sells its ILS-5 system through direct sales and various alliances as described below.

Alliances

Terrano has various alliances/agreements with the following vendors that also market AS/400-based systems:

- Since 1992, Terrano has had an agreement with GTE Health

Systems (GTEHS) to market Terrano's ILS-5 system to current and prospective GTEHS clients. GTEHS markets and supports the MedSeries4 Hospital Information System. Terrano sold six ILS-5 systems under this agreement during 1993.

- During 1993, Terrano entered into an agreement with IBAX Healthcare to market Terrano's ILS-5 system to current and prospective IBAX Series 3000 and 4000 system clients. Terrano sold eight ILS-5 systems under this agreement during 1993.
- In March 1994, Terrano formed an agreement with First Coast Systems, Inc. to market the ILS-5 to First Coast's current and prospective APACS Hospital Information System clients.

Competitors

Competitors include large hospital information system vendors selling laboratory information modules to existing clients or as an adjunct to the HIS sale, laboratory information system vendors offering fully-featured systems and laboratory information system vendors selling networked microcomputer systems.

- Large hospital information system vendors: HBO & Company, Shared Medical Systems and Medical Information Technology (MEDITECH)
- Laboratory information systems for DEC/HP/IBM: Cerner Corporation,

Sunquest Information Systems, Dynacor, 3M Health Information Systems, Advanced Laboratory Systems, Antrim Corporation and Soft Computer Consultants

- Laboratory information systems with dedicated file servers: Citation, Laboratory Consulting, Community Health Computing and 3Net Systems

INPUT Assessment

Terrano's strengths include the following:

- A single version software philosophy that assures clients of the latest technology—regardless of when purchased
- Targeting a high-growth area of the hospital market (80 to 300 beds)
- Strong partnerships with several leading vendors in the health care industry

Terrano's challenges include:

- Possible need to migrate from a single-platform (AS/400) product line to an open system platform to stay competitive
- Competing against several larger, better-financed vendors

**COMPANY
PROFILE**

INPUT[®]

CA
NBerry

TESSERACT CORPORATION

475 Sansome Street
San Francisco, CA 94111
Phone: (415) 981-1800
Fax: (415) 981-4600

President & CEO: Woodson M. Hobbs
Status: Private
Total Employees: 200 (12/93)
Total Revenue: \$31,500,000*
Fiscal Year End: 12/31/93

* INPUT estimate

Key Points

- Tesseract offers a fully integrated set of human resource software products built around a common relational database for integrity and ease of use and supporting cooperative processing via centralized, client/server or fully distributed architectures.
- During 1993, Tesseract announced its second generation of client/server products, delivering true, distributed technology through user interfaces supporting Windows, OS/2 and Motif. The products support databases from IBM, Oracle and Sybase running on Windows, UNIX OS2 and Netware operating systems. The products are scheduled for availability during 1994.
- In March 1993, Prudential Insurance Corporation sold its controlling interest in Tesseract to a group of investors led by Feibusch & Co. Prudential retains a significant stake in Tesseract and remains one of its largest customers.

Company Description

Tesseract provides human resource management systems (HRMS) applications software products and professional services for IBM cooperative environments, supporting mainframe, client/server and distributed platforms. There are currently more than 400 products implemented for more than 150 customers nationwide.

- Tesseract was formed in 1970 as a private company to provide data processing education, consulting and custom development services in the area of human resource applications to IBM mainframe users. The company introduced its first product in 1975.
- Tesseract became a wholly owned subsidiary of Prudential Insurance Corporation in 1986.
- In March 1993, Prudential sold controlling interest in Tesseract to a group of investors led by Feibusch & Co.
 - Prudential retained a significant stake in Tesseract, is represented on Tesseract's Board of Directors and remains one of Tesseract's largest customers for both internal use and external servicing.
 - The purposes of the transaction were to create employee ownership and incorporate a group of knowledgeable investors.
 - Subsequent to the transaction, Tesseract had no debt and none of Tesseract's substantial cash resources were used in the purchase of stock by Tesseract's investors.

Strategy

Tesseract's mission is *"To be the premier provider of computer-based human resource solutions for sophisticated customers."*

The company's strategy is to offer its products centralized, client/server and distributed architectures.

- The company has, historically, provided its software primarily for IBM and compatible mainframe databases and operating systems and will continue to support these users.
- Tesseract also will support current and prospective customers that are downsizing or rightsizing hardware for some applications through its client/server and distributed products.

Financials

INPUT estimates Tesseract's 1993 revenue was \$31.5 million, compared to 1992 revenue of \$31.9 million. A four-year revenue summary follows:

**TESSERACT CORPORATION
FOUR-YEAR REVENUES SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR			
	1993	1992	1991	1990
Revenue	\$31.5*	\$31.9	\$25.0	\$18.5
Percent increase from previous year	--	28%	35%	N/A

* INPUT estimate

Revenue remained relatively flat during 1993 due to new management, product direction change and market confusion concerning client/server.

Market Financials

Tesseract's revenue is derived from clients across industries, including banking, insurance, health care, manufacturing and utilities.

- Currently 30% of the Fortune 100 companies are Tesseract customers.
- Tesseract also has a large number of customers among Fortune 500 and 2000 corporations.

As corporate human resource departments are becoming more sophisticated, Tesseract's new customers are increasingly being generated from mid-sized companies. Clients range in size from 950 to 565,000 employees.

Geographic Markets

Approximately 95% of Tesseract's 1993 revenue was derived from the U.S. and 5% from international sources, primarily Canada.

Key Products and Services

Approximately 60% of Tesseract's 1993 revenue was derived from applications software products and associated maintenance services, and 40% from professional services consulting.

Software Products:

Tesseract's HRMS products include the following:

- Benefit/Flexible Benefit Plan Administrator (BPAS) contains functions to cover all aspects of benefit and flexible benefit administration, including nondiscrimination testing, COBRA, tax reform and legislative compliance, eligibility processing, participation reporting, billing and carrier reporting.
- Investment Plan Manager (IPM) handles all of the administration, reporting and analysis requirements for 401(a), 401(k), IRAs, Employee Stock Ownership programs, savings and other defined contribution programs.
- Human Resource Manager (HRM) functions include employee identification, government compliance, applicant and skills tracking, education, training and development, salary planning, compensation, position control, health and safety.
- Payroll System (PAY) provides earning control, tax administration, Canadian taxes, deduction control, on-line checks, accrual control, labor distribution, payroll accounting and inquiry, time reporting, batch processing and payroll reporting.
- Claims Processing System (CPS) processes all types of medical, drug, dental, vision and hospital claims. CPS also provides analysis and health care cost containment through case management, COB, claims capture and correspondence.
- Retirement Plan Manager (RPM) provides administration functions for defined benefit plans, including historical earnings and hours recordkeeping, service calculation, social security benefit calculations, final average earnings and benefits calculations.

Tesseract products are available for centralized, client/server and fully distributed platforms.

- The products support the major IBM mainframe database management systems, including DB2. Cooperatively, Tesseract's Enterprise Server allows data to be distributed to users running OS/2 or Windows 3.0, as well as nonprogrammable terminals.
- Tesseract's first generation of client/server products consists of three products that can be used individually, or in combination, to enable any customer to distribute functions and data and integrate and develop companion applications.

- INFO CENTER 1.1 distributes a replica or subset of a production database to a relational database on UNIX, Windows NT, OS/2 or Netware servers for querying, reporting, charting, analysis, project management etc. INFO CENTER is for customers who wish to distribute data to lower the cost of querying and reporting, while remaining integrated with more centralized servers for higher-performance, transaction-oriented products like Payroll, Benefits and Claims.
- INTUITION 4.0 supports Windows and OS/2 and provides a graphical user interface to Tesseract's mainframe server products.
- PRIMROSE 1.2 provides tools for building fully distributed applications that can query centralized or distributed relational databases.
- HR Solutions Center is a package of application solutions, tools and services for Tesseract customers to enhance mainframe HRMSs with client/server applications. The solutions are delivered as templates and are adapted to an organization's unique requirements using the Primrose tool and packaged implementation services.
- The Tesseract HR InfoCenter provides access to Tesseract's integrated human resource database through a distributed client/server environment for easy, low-cost querying and reporting by users.
- HR InfoCenter establishes a read-only reporting subset of the central HR database on LAN-based UNIX, Windows NT or OS/2 servers for querying, reporting, charting, analysis and product management on desktop workstations.
- HR InfoCenter supports databases from IBM, Oracle and Sybase running on Windows, UNIX, OS2 and Netware operating systems, as well as symmetric multiprocessing operating systems like Windows NT and Pyramid SMP.

Software pricing for HR applications is based on the size of a company's employee population.

- The annual maintenance fee is a percentage of the current license price for an application.
- Support for customers with client/server environments and client/server migration issues will come primarily from Tesseract's Consulting Services Division.

Support Services:

Tesseract provides each software customer with a complete set of on-site training programs, an account manager to coordinate all Tesseract resources, a regional helpline, a central hotline, consulting, product planning, performance tuning, product adaptation and development services.

The Tesseract Consulting Services Division, formed in 1990, is made up of three teams as follows:

- Implementation Consulting Services furnishes additional implementation support to Tesseract's software customers and provides additional skill sets to meet customers' needs, including systems requirements definition, database design and set-up, conversion and interface programs and customized programs and reports.
- The General Consulting Services Team provides consulting for projects that require additional business and technical consulting, user exit designs, conversions, interfaces or custom programming.
- Systems Integration Consulting assists customers in migrating from mainframe applications toward enterprise-wide distributed solutions.

Pricing for these support services is on a per-project basis.

Marketing and Sales

Tesseract markets its products and services in the U.S. and Canada through a direct sales force.

In addition to its headquarters in San Francisco, Tesseract has regional offices in Chicago, Dallas and Paramus (NJ). The regional offices are staffed with customer services, sales and product specialists.

Alliances

Tesseract has been an IBM Business Partner for SAA since 1987. Tesseract continues to work closely with IBM to ensure that Tesseract HRMS products fully comply with IBM's SAA strategy.

In addition to its business partnership with IBM, Tesseract has marketing agreements with Microsoft, Walker Interactive Systems, Price Waterhouse and Report Smith Inc.

Clients

Tesseract customers include American Airlines, Arkla, Inc., Baxter-Healthcare Corporation, Bristol-Myers Squibb, Chevron Corporation, City of Long Beach, Deere & Co., General Mills, Kaiser Permanente, Lockheed Missiles & Space Co., Prudential Securities, Inc., Bank of America, Texas Utilities and Wells Fargo Bank.

Competitors

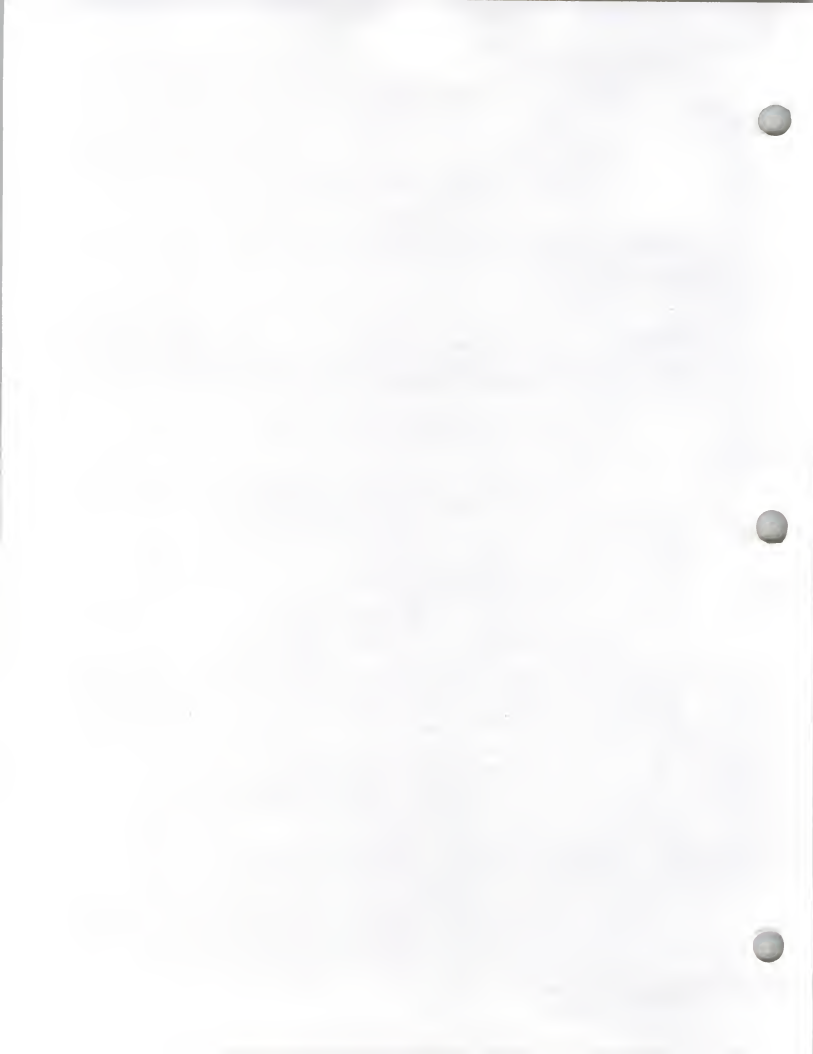
Tesseract's primary competitors include Integral Systems, PeopleSoft, D&B Software, GENESYS, SAP America and Computer Associates.

**INPUT
Assessment**

Tesseract's major strengths include its distributed computing architecture, strong customer base and financial stability. Tesseract has 10 customers that have been clients for more than 10 years and 65 customers that have been clients between 5 and 10 years.

Tesseract's key challenge for 1994 is to deliver its distributed computing HR applications and address the confusion over client/server.

- Because Tesseract has chosen to provide support and a migration path for its existing customer base, its distributed applications are coming to market in 1994 rather than last year.
- The company states that its customers have not pushed Tesseract to provide client/server features more quickly because the reality for many large companies is that they are not yet ready to move mission-critical applications from the mainframe. Rather, they want to move more slowly and work with a vendor that will provide them with distributed capabilities on an "as needed" basis.
- Tesseract's product rollout in 1994 will allow running applications on a variety of platforms and in combination, incorporating mainframe, LAN server or both. This ability permits clients to run certain HR applications on departmental LAN servers, but (for security or processing reasons), continue to integrate that data with mainframe-based payroll or other applications.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1995

Thomson Financial Services

President: Mason Slaine
CFO: Fred H. Edling
22 Pittsburger Street
Boston MA 02210
Phone: (617) 345-2000
Fax: (617) 737-3165

INPUT LIBRARY

Status:	Division
Parent:	The Thomson Corporation
Employees:	3,000 (12/94)
Revenue:	\$ 450,000,000*
Fiscal Year End:	12/31/94
*INPUT Estimate	

Key Points

- Thomson Financial Services (TFS) provides financial software, information, research and analysis to financial and corporate communities worldwide.
- To date, TFS has an installed base of over 45,000 customers in more than 65 countries.
- In 1994, Mason Slaine took over from Andrew Mills, as the president of TFS.

Company Description

Thomson Financial Services, a business division of the Thomson Financial and Professional Publishing Group (TFPPG) within the Thomson Corporation, provides on-line financial information, research, analysis and systems software products to the business and financial markets worldwide.

Headquartered in Toronto (Canada), The Thomson Corporation is a \$6 billion company that publishes newspapers and business-to-business information. The Thomson Corporation is comprised of four main groups

- Thomson Financial and Professional Publishing Group (TFPPG)

- Thomson Corporation Publishing International (TCPI)
- Thomson Newspapers (TN)
- Thomson Travel (TT)

Organization and Structure

Headquartered in Boston (MA), TFS has over 35 offices worldwide, and serves over 45,000 clients in over 65 countries. TFS has office locations in several parts of the U.S. and international offices in Canada, Europe, and the Pacific Rim.

TFS is comprised of more than 30 self-contained businesses. Principal companies and products include:

- Alert
- American Banker/The Bond Buyer
- Asset Backed Securities Group
- AutEx
- CDA Investment Technologies
- First Call Corp.
- ILX Systems
- International Financing Review
- The Investext Group
- Muller Data Corp.
- Municipal Market Data
- Thomson Municipal Services
- OASYS
- Thomson Investment Software
- Securities Data Publishing
- Securities Data Company
- Securities Information Center
- Sheshunoff Information Services
- Technical Data
- Thomson Bankwatch
- Thomson Financial Publishing
- Valorinform

Company Strategy

TFS' strategy is to sustain its growth through new business initiatives, staff training and high level of customer service.

On the international front, the company intends to increase its presence by having its regional managing directors in Europe and Asia developing non-U.S. businesses, providing custom products and services catered to their local markets.

Financials

INPUT estimates TFS' revenue was approximately \$450 million in 1994, compared to \$407 million in 1993 and \$336 million in 1992.

Market Financials

TFS markets its software products and services mainly to the finance and investment industries.

Employees

As of December 31, 1994, TFS had approximately 3,000 employees.

Key Products and Services

TFS develops banking software and provides on-line financial database services to the business and financial markets.

The company's product/service offerings are summarized below:

Equities/Mutual Funds

- AutEx—An electronic database and on-line real-time network for trade order indications used by the investment industry
 - BlockDATA—A service that provides customized reports on block trading activity for AutEx
- CDA Investment Technologies—Provides institutional ownership data, portfolio performance data and mutual fund risk and performance characteristics. Products lines include:
 - CDA/Bullseye
 - CDA/InvestNet
 - CDA/Spectrum
 - CDA/Wiesenberger
- First Call—The First Call Group is a joint venture of several U.S. securities firms. It is a financial research network that provides real-time analyst morning notes, intraday research broadcasts, and real-time earnings estimates from the world's top brokers. Related products/services include:
 - First Call RTEE (Real Time Earnings Estimates)
 - First Call Research Direct
 - First Call Notes
- ILX Workstations—Provide a single integrated source for financial information needs. It links to First Call, AutEx and CDA/Spectrum
- TradeView—Trade order tracking system

- TradeRoute—Trade order routing system
- Private Research Services—A service targeted toward brokers, enabling them to customize a private on-line delivery system for their clients

Fixed Income And Currency

- The Bond Buyer—A daily newspaper and database for the municipal bond industry. It includes:
 - The Bond Buyer's Bidcomp
 - The Bond Buyer's Munifile
 - The Bond Buyer's MuniView
 - The Bond Buyer's Munistatements
 - The Bond Buyer's Worksheets
 - The Bond Buyer On-Line
- BondCall—A real-time fixed income research source
- BondText—An on-line full-text database containing research reports on corporate, government and municipal debt
- International Financing Review (IFR) Publishing—Provides weekly global capital markets transaction news. It includes:
 - Corporate Eye
 - IFR Database Information Services
 - International Financing Review
 - IFR Japanese Edition
 - Japan Watch
 - Vigil

- **Muller Data**—Provides end-of-day pricing on domestic and international equity, fixed income and treasury securities. It includes:
 - **Munifacts**—Provides real-time market news, offerings, syndicate messages, broker quotes and related data
 - Other offerings include—**Munifacts Plus**, **Munifacts Disclosure Service** and **Munifacts Offering Service**
- **Municipal Market Data**—On-line service that provides technical and fundamental analysis of municipal bond cash and futures markets. It comprises of:
 - **Municipal Strategies, Inc.**
 - **Variable Rate Demand Note Network**
- **Technical Data**—Delivers real-time fixed income and foreign exchange analysis to market professionals worldwide over the Telerate network
- **Thomson Research**—Provides research and analysis on trading strategies by telefax. It includes **MMD Viewpoint**

Structured Securities

- **Asset Backed Securities**—Provides disclosure data and analytics on structured securities. Offerings include:
 - **Almont Analytical MBS Analysis System**
 - **POOL**
 - **Trepp Pricing Services**
 - **Trepp Security Master Services**

Portfolio Management

- **Investment Software Division**—Offers tools for portfolio reporting, trading and investment analysis. Its offerings include:
 - **PORTIA**—A real-time, multi-user investment management tool for portfolio reporting, trading, accounting, operations and investment analysis
 - **CADENCE**—A tool that provides comparative statistical data to bank trust departments, pension consultants, investment managers and fund sponsors
 - **PARAGON**—A tool for trading and investment analysis

Securities Settlement

- **ALERT**—A standard for electronic trade settlement
- **OASYS**—Electronic network for sending and accepting trade details. Family of products include—**OASYS U.S.**; **OASYS U.S. Fixed-Income**; and **OASYS Global**
- **INSTANT LINK**—An electronic global trade confirmation and settlement system
- **Securities Information Center (SIC)**—Operator of the lost and stolen securities program for the Securities and Exchange Commission (SEC)
- **Valorinform**—Database that provides information on equities, income and capital change
- **Thomson TRADELINX**—An electronic trade communication network

Corporate Finance/Information

- First Call Corporate Release—A two-way source for communication between corporations and Wall Street
- Investext—Database offering intelligence on companies, products, industries and regions of the world. The Investext group offers:
 - Pipeline
 - BondText
 - I/PLUS Direct
 - MarkIntel Master
 - Research Bank-Global Edition
 - MarkIntel
- Securities Data Company (SDC)—Database containing information on domestic and international merger and acquisition activity
- Securities Data Publishing—Offers magazines, journals, newsletters and directories
- IFR/Securities Data Information Services—Databases containing primary market data on all cross-border transactions in the debt, credit, loan and international equity markets. Databases include IFR Bondbase, Notebase, Equibase and Bidbase
- Venture Economics Data—Provides details on the venture capital business. Databases include:
 - Strategic Alliance Database
 - Venture Intelligence Database
 - Venture Capital Performance Indicator Database

- Venture Economics Publishing—Database of venture-backed firms and alliances. Publications include Venture Capital Journal, Pratts Guide to Venture Capital Sources, European Venture Capital Journal and UK Venture Capital Journal

Banking

- American Banker—A daily national publication that tracks banking and financial services
- Sheshunoff Information Services—Provides financial data, analysis and ratings on all federally insured banks, S&Ls, savings banks and bank holdings companies. Related products include:
 - Sheshunoff Financial Performance Review
 - Sheshunoff Regulatory Compliance
 - Sheshunoff Regulatory Reporting Software
- Thomson BankWatch—Provides ratings on financial institutions such as U.S. banks and thrifts, international banks, securities firms and insurance companies
- Thomson Financial Publishing—Provides information on transfer of funds and research/business development

Clients

TFS serves customers in the banking and investment markets worldwide.

Marketing and Sales

In the U.S., the company has branch offices in Altamonte (FL); Atlanta (GA); Austin (TX); Boston (MA); Chicago (IL); Cincinnati (OH); Englewood (CO); Ft. Lauderdale (FL); Farmington (CT); Hoboken (NJ); Los Angeles (CA); Newark (NJ); New York (NY); Pasadena; Rockville (MD); San Francisco

(CA); Seattle (WA); Skokie (IL); Stamford (CT) and Washington (D.C.).

TFS has international offices in Toronto (Canada); London, Paris, Berne, Geneva, Frankfurt and Budapest (Europe); and Hong Kong, Sydney, Kamakura, Tokyo and Singapore (Pacific Rim). Through its offices overseas, TFS creates and distributes its products globally.

Competition

Some significant competitors by product include:

- First Call—Multex Systems, Inc.
- Trading networks—Davidge Data Systems, Merrin Financial Inc.
- Thomson Investment Software—Sungard, Advent Software.

Parent Company

The Thomson Corporation
Suite 2706,
Toronto Dominion Bank Tower,
PO Box 24, Toronto-Dominion Centre
Toronto, Ontario M5K 1A1
Phone Number: (416) 360-8700
Fax Number: (416) 360-8812

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

June 1995

Thomson Professional Publishing

President & CEO: George Wallace
Metro Center
One Station Place
Stamford, CT 06902
Phone: (203) 969-8700

INPUT LIBRARY

Status:	Operating Group
Parent:	The Thomson Corporation
Employees:	4,800 (5/95)*
Revenue:	\$ 631,000,000
Fiscal Year End:	12/31/94
* INPUT Estimate	

Key Points

- Thomson Professional Publishing (TPP) provides print and database products for U.S. and Canadian legal, tax, accounting, human resources and regulatory markets.
- In early 1995, TPP's parent company—The Thomson Corporation—acquired Barclays Law Publishers. The acquired company now operates as a business within TPP.
- TPP has rapidly expanded its electronic product line offerings through the introduction of seven new CD-ROM titles by

Clark Boardman Callaghan—a TPP company.

Company Description

TPP is a provider of primary, analytical and business information to professionals in the legal, tax, accounting, human resources and regulatory markets. TPP's offerings are available in both print and electronic formats.

TPP is an operating unit of The Thomson Corporation, a \$6.4 billion company based in Toronto, Ontario that publishes newspapers and business-to-business information.

In May 1994, in order to optimize its development and growth potential The Thomson Corporation reorganized its information and publishing organization to form two groups—Thomson Financial & Professional Publishing Group (TFPPG) and

Thomson Corporation Publishing International (TCPI).

TFPPG, as a whole, provides about 3,300 individual products, including 170 on-line services, 180 CD-ROM products, about 40 software packages, 440 loose-leaf services, 175 newsletters and approximately 2,000 books and directories.

Organization and Structure

TPP is one of two business groups within the TFPPG, which in turn is an operating group within Thomson Information Publishing Group (TIPG).

The Thomson Corporation's organization structure is shown in Exhibit A on the following page.

Headquartered in Stamford (CT), TPP has offices in San Francisco (CA), Ontario (Canada), Webster and New York (NY), Deerfield (IL), Rochester (NY), Kent (OH), Fortworth (TX), Stamford (CT) and Boston (MA).

TPP is comprised of the following entities:

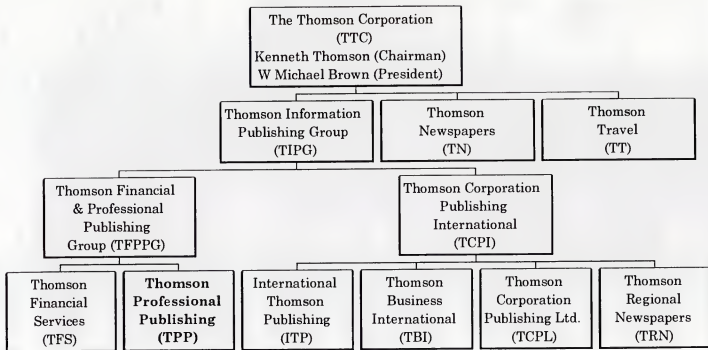
- Bancroft-Whitney
- Barclays Law Publishers
- Carswell
- Clark Boardman Callaghan
- Faulkner & Gray
- Lawyers Cooperative Publishing
- Practioners Publishing Company
- Research Institute of America
- TPP-Manufacturing
- Warren Gorham & Lamont

Company Strategy

TPP's strategy is to sustain its growth through accelerating development of new products, leveraging individual companies' resources, integrating new technologies, implementing tighter cost controls and continuing its commitment to working closely with customers.

In an effort to exploit the growing opportunity in the electronic products market, TPP is accelerating the migration of its product offerings to the CD-ROM format. TPP anticipates that 1995 revenue from new sales of its electronics products will exceed that of new print sales.

Exhibit A
The Thomson Corporation
Organization Chart



Financials

TPP's 1994 revenue was \$631 million, an 8% increase over 1993 revenue of \$585 million.

Operating profit in 1994 reached \$93 million, a 13% increase over \$82 million in 1993.

A three-year financial summary follows.

Thomson Professional Publishing Three-Year Financial Summary (\$ Millions, except per share data)

Item	Fiscal Year		
	12/94	12/93	12/92
Revenue	\$631	\$585	\$556*
• Percent change from previous year	8%	5%	N/A
Operating income	\$93	\$82	\$78*
• Percent change from previous year	13%	5%	N/A

* INPUT Estimate

The company attributes increase in revenue in 1994, largely to the launch of new legal and tax products in the CD-ROM format:

- Seven new CD-ROM product launches by Clark Boardman Callaghan, including *Nichols Electronic Legal Forms* and *Employment PowerLink*.
- New state product launches by Lawyers Cooperative Publishing, in Connecticut, Illinois, Louisiana, Massachusetts, New York and Texas.
- New state tax products introduced by Research Institute of America.
- Increase in renewal business for Warren Gorham & Lamont
- Introduction of several new publications by Practitioners Publishing Company, including *Estate Planning*, *Nonprofit Financial Statements* and its first CD-ROM title—*1040 Deskbook Plus*.

- Growth in subscriptions to publications—*Credit Card Management*, *Accounting Today*, *US Banker* and *Bank Technology News* from Faulkner & Gray.

TPP anticipates that for the first time, in 1995, new sales of electronic products will exceed its new print sales.

Market Financials

TPP markets its products and services mainly to the professional, business, financial services and legal industries, among others.

Geographic Markets

Virtually 100% of TPP's revenue is derived from North America.

Acquisitions

In early 1995, TTC acquired Barclays Law Publishers, a company known for publishing the *Official California Code of Regulations* and official administrative codes for Illinois and North Carolina.

Employees

As of May 1995, INPUT estimates that TPP had approximately 4,800 employees. TFPPG had a total of approximately 8,000 employees.

Key Products and Services

Major imprints and companies within TPP include:

- Bancroft-Whitney—A leading publisher of primary and secondary information in the state of California with publications such as *Deering's Codes*, *Official California Reports* and *Witkin series* of treatises. Recent practice-oriented offerings include *California Civil Practice* and *LawDesk®*.
- Barclays Law Publishers—Acquired in 1995, with well-known publications including the *Official California Code of Regulations* and official administrative codes for Illinois and North Carolina.
- Carswell—A legal publisher in Canada with offerings that include treatises, loose-leaf encyclopedias, law reports, newsletters and monographs.
 - A well-known title is the *Canadian Abridgement*.
 - Carswell is expanding its information services in the legal and accounting areas through new on-line research services.
- Clark Boardman Callaghan (CBC)—Publisher of highly-specialized treatises, handbooks and newsletters in legal fields including securities, corporate and commercial law.
 - CBC also specializes in bankruptcy, environmental, intellectual property and tort/personal injury.
- Some published titles include *Securities and Federal Corporate Law*, *Fletcher Encyclopedia of Corporations* and *Hawklund Uniform Commercial Code series*.
- Faulkner & Gray—A large publisher of banking magazines, with publications including *Credit Card Management* and *Accounting Today*.
- Lawyers Cooperative Publishing (LCP)—Provider of analytic research information, with products such as *American Law Reports (ALR)*, *American Jurisprudences 2d* and *United States Code Service (USCS)*. LCP is introducing new products in states such as Florida, Illinois, Massachusetts, Michigan, New York and Pennsylvania.
- Research Institute of America (RIA)—Provider of federal and state tax research and compliances in print and electronic formats. Products offered include *Federal Tax Coordinator*, *The U.S. Federal Tax Reporter*, *Federal Tax Guide* and *Tax Citator*. RIA also provides a range of State Tax services.
- Warren Gorham & Lamont (WGL)—WGL along with its subsidiary—Practitioners Publishing Company, offers specialized newsletters, journals, magazines and supplemented books with major offerings on the tax, accounting and human resources fields. Practitioners Publishing Company introduced its first CD-ROM title—1040 Deskbook Plus—in 1994.
- TPP-Manufacturing

Marketing and Sales

TPP sells its products and services mainly in North America, through its sales staff located in offices in ten major cities.

Competition

TPP faces significant competition from Mead Data Central (LEXIS/NEXIS), West Publishing Company (WESTLAW), Dow Jones News Retrieval, Knight-Ridder Information Services, VU/TEXT and BRS.

INPUT Assessment

In spite of the continued competitive market pressures that persist in the tax and legal areas, TPP's sales in 1994 grew by 8%, due to several new product launches, particularly in the CD-ROM format. TTP has invested heavily in the development of CD-ROM products in recent years and will continue to develop its information databases.

Parent Company

The Thomson Corporation

Suite 2706

Toronto Dominion Bank Tower

PO Box 24, Toronto-Dominion Centre

Toronto, Ontario M5K 1A1

Revenues: \$6,354,000,000 (12/94)

Employees: 48,250 (12/94)

Vendor Profile

A Publication from INPUT's Vendor Analysis Program - U.S.

May 1994

Timberline Software Corporation

Chairman & President : John Gorman
9600 SW Nimbus Avenue
Beaverton, OR 97005-7163
Phone: (503) 626-6775
Fax: (506) 526-8299

INPUT LIBRARY

Status:	Public
Employees:	214 (12/93)
Revenue:	\$18,204,693
Fiscal Year End:	12/31/93

Key Points

- Timberline® Software Corporation provides accounting and management computer software products to the construction, property management and architecture/engineering industries.
- Total 1993 revenue reached \$18.2 million, a 22% increase over 1992 revenue of \$14.9 million.
- In early 1994, Timberline signed an agreement with McDonald's Corporation to develop a marketing program based on McDonald's use of Timberline's Precision Extended estimating software.

- In 1994, the company plans to upgrade all Timberline software to comply with Open Database Connectivity (ODBC)—a data exchange methodology developed by Microsoft® that has been accepted as an industry standard.

Company Description

Timberline Software Corporation develops, markets and supports accounting and management information computer software primarily for the construction, property management, and architecture and engineering industries. The company offers four software product lines—construction accounting, estimating, property management, and architect and engineer.

- Prior to its incorporation in 1979, the company operated for approximately eight years as a division of a subsidiary of

Orbanco Financial Services, Inc., a bank holding company based in Portland (OR). In 1979, the company acquired substantially all of the assets and liabilities of that division.

- The company operated as Timberline Systems, Inc. through 1986 and also sold Texas Instruments (TI) computers with its minicomputer software products. This hardware resale business was discontinued in March 1986 and the company changed its name to Timberline Software Corporation to more accurately reflect its software product business.

Structure and Operations

Headquartered in Beaverton (OR), the company has regional sales offices in Los Angeles (CA), Denver (CO), Dallas (TX), Boston (MA), New York (NY), Concord (NC) and Pompano Beach (FL).

Timberline is currently organized into four product-oriented business units, each responsible for its own product content, development and support. These units include:

- Construction Accounting division has 68 employees and contributed approximately \$4.38 million (40%) to Timberline's 1993 software sales.
- Construction Estimating division has 37 employees and contributed about \$3.79 million (34%) to Timberline's 1993 software sales.
- Property Management division has 37 employees and contributed approximately

\$2.18 million (20%) to Timberline's 1993 software sales.

- Architects and Engineers division has 13 employees and accounted for approximately \$0.60 million (5%) of Timberline's 1993 software sales.

Administrative functions stay in the Timberline Corporate Unit.

Company Strategy

Timberline is investing generously in improving its product development and customer support.

The company has moved through four major technological environments—minicomputers, early microcomputers, DOS and now, the graphical world, and has rebuilt its product line each time.

Timberline is moving all of its products to a Graphical User Interface (GUI) environment. The Construction Gold product was first in this development effort and the company is currently working on its Estimating, Property Management, and Architects and Engineers product lines.

Timberline's Construction Accounting has a two-tier product strategy—the Construction Gold for high-end users whose needs include management decision-making and accounting, and the Medallion line for users with less complex needs.

As part of product development, Timberline has developed an ODBC driver that enables customers to have outside access to a proprietary database, using off-the-shelf

software. This will increase the usefulness of Timberline's products.

Financials

Total 1993 revenue reached \$18.2 million, a 22% increase over 1992 revenue of \$14.9

million. Net income rose 89%, from \$327.7 thousand in 1992 to \$620.1 thousand in 1993. A five-year financial summary follows:

Timberline Software Corporation Five-Year Financial Summary (\$ Thousands, except per share data)

Item	Fiscal Year				
	1993	1992	1991	1990	1989
Revenue	\$18,205	\$14,902	\$12,697	\$12,684	\$10,741
• Percent increase from previous year	22%	17%	--	18%	20%
Income before taxes	\$950	\$416	\$20	\$711(a)	\$1,255
• Percent increase from previous year	128%	*	(97%)	(43%)	70%
Net income	\$620	\$328	\$16	\$429	\$769
• Percent increase from previous year	89%	*	(96%)	(44%)	72%
Earnings per share	\$0.27	\$0.14	\$0.01	\$0.18	\$0.31
• Percent increase from previous year	93%	*	(94%)	(42%)	72%

- (a) Includes write-offs of notes receivable of \$161,000 associated with Financial Software Associates Corporation, a joint venture supplying software to accountants.
- Over 1000%

The revenue increases in 1993 and 1992 were attributed to the following factors:

- Introduction of new products, principally Construction Gold
- Increased sales by the company's dealer channel
- Direct sales to large national accounts

Research and development expenditures were approximately \$732,000 (4% of revenue) in 1993, compared to \$704,000 (5% of revenue) in 1992.

Interim results: Revenue for the three months ending March 31, 1994 reached \$4.68 million, a 14% increase over \$4.11 million for the same period in 1993. Net income for the period rose 238%, from \$13,000 to \$44,000 in 1994. Timberline's Construction Gold financial management software was a significant contributor to the first quarter revenue.

Software sales grew 7% to \$2.68 million in the first quarter of 1994 from \$2.52 million in 1993. Service fees from support, maintenance and training increased 24% to \$1.89 million in

the first quarter of 1994 versus \$1.53 million for the same quarter in 1993.

Market Financials

Timberline's software products are used by the construction, property management, and architecture and engineering industries.

Between 72% and 74% of Timberline's total 1993 revenue was derived from the

construction industry, 20% from property management and 5% from architecture/engineering industries.

Revenue Analysis by Product Line

Approximately 60% of Timberline's 1993 revenue was derived from software products, 38% from professional services and 2% from other support fees. A three-year summary of source of revenue follows:

Timberline Software Corporation
Three-Year Source of Revenue Summary
 (\$ thousands)

Item	Fiscal Year					
	1993		1992		1991	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Software products	\$11,009	60%	\$8,676	58%	\$7,644	60%
Services (a)	6,956	38%	6,026	40%	4,780	38%
Other (b)	240	2%	200	2%	273	2%
Total	\$18,205	100%	\$14,902	100%	\$12,697	100%

(a) Includes maintenance and support, training and consulting.

(b) Includes other support services.

Construction and estimating accounted for between 72% and 74% of software sales for the years 1993, 1992 and 1991. Property management sales grew to 20% of total software sales in 1993, from 18% in 1992 and 10% in 1991. Architects and Engineers accounted for 5% of software sales in 1993 and 7% of sales in 1992 and 1991.

Service fees from support, maintenance and training increased 15% and 26% in 1993 and 1992 respectively.

This increase was attributed to the following:

- Growing customer base
- Increase in the number of training classes offered
- Increased demand from large national accounts for on-site consulting

Geographic Markets

Timberline markets its products and services primarily in the U.S. The company also licenses its software products into Canada, Australia, New Zealand and other foreign countries.

Over 90% of Timberline's 1993 revenue was derived from the U.S. Revenue from international markets accounted for less than 10% of total revenue.

Employees

As of December 31, 1993, Timberline had approximately 214 employees, segmented as follows:

Marketing and sales	34
Customer support	72
Research and development.....	65
Computer operations	7
General and administrative	36
	214

- The company currently has 223 employees.

Key Products and Services

The company has four software product lines—construction accounting, estimating, property management, architect and engineer.

Construction Accounting consists of two different levels of software:

- The Medallion® line of software operates only in the DOS operating environment. It is designed specifically for the homebuilder/remodeler and small to medium-sized general and specialty contractors.

The Medallion Collection products include:

- Accounts Payable
 - Accounts Receivable
 - Equipment Management
 - General Ledger
 - HomeBuilder
 - HomeBuilder Payroll
 - Inventory
 - Job Cost
 - Payroll Plus
 - Progress Billing
 - Purchasing Management
 - Receivables Management
 - TS-Bridge
 - TS-Report I
 - TS-Report II
- The Construction Gold line of software operates in the Windows and OS/2 operating environments. It is designed specifically for medium to large-sized construction companies and other users with more advanced accounting and management information needs. Construction Gold products include:
 - Accounts Payable
 - General Ledger Plus
 - Job Cost
 - Payroll
 - Receivables
 - Executive Information Systems
 - TS-REPORT
 - ODBC Driver
 - MICR Interface

Estimating software is designed to allow an estimator to compile a bid on construction projects based on parameters such as the architectural design, building materials required and material and labor costs.

• The Precision Collection® is a family of integrated estimating software applications that is fully integrated with the Medallion collection of accounting software. The Precision Collection products include:

- Bid Analysis
- Buyout
- Cut & Fill
- Databases
- Digitizer
- Means Timberline Databases
- Estimating
- Estimating Plus
- Estimating Extended
- Pricer
- Estimating Light
- CAD Importer
- CAD Integrator
- Means Integrator
- Microsoft® Project Integrator
- Microsoft® Project for Windows Integrator
- Primavera Integrator

Property Management software is an accounting and management information system designed for managers of residential and commercial properties.

It provides information to the managers regarding revenues and expenses of various properties and generates financial reports about the properties to various owners, as well as reports containing tenant and lease information about the properties. Software products include:

• Property Management Gold is designed for the medium to large-sized property management companies.

• SitePro is designed specifically for on-site managers of residential properties to enable them to track financial and tenant information.

Architects and Engineers software is an accounting and management information system for architectural and engineering firms that is designed to provide basic accounting information along with the capability to generate billing information on a project basis. Software products include:

- AEasy
- AEasy Plus
- TimeTrax

TimeTrax, the company's new Architects and Engineers software product, is designed to enhance and streamline the process of time entry into systems that track billable time and labor costs.

Professional Services

The company offers maintenance, support, training and consulting services.

- Maintenance contracts allow the user to obtain program changes and enhancements as they are released.
- Support contracts allow the user to obtain telephone support from the customer support department that answers applications-related questions.
- Users may pay a fee to attend classes offered to learn about the use of Timberline's software and obtain customized training at the user site and other consulting services.

Clients

Timberline's customers include—McDonalds, Cushman & Wakefield, Teachers Insurance and Annuity Association among others.

Marketing and Sales

The company markets its software products and services primarily in the U.S. The company also licenses its software products into Canada, Australia, New Zealand and other foreign countries.

Virtually all product distribution is handled by value-added dealers and distributors. A direct sales force complements the dealer channel and handles sales to national accounts and large companies.

Timberline maintains a telemarketing staff to sell maintenance and support service contracts and classroom training to its customer base.

Competition

Timberline's major competitors, by product line, include the following:

- Construction—Construction Data Control, Software Shop, Concord and Maxwell.

- Estimating—MC2, G2 and Construction Data Control.
- Property Management—Jonas & Erickson, Skyline and TenMan.
- Architecture/engineering—ACCI, Harper-Shuman and Wind-2 One.

INPUT Assessment

Timberline's strengths include its high quality software products that are flexible and user-friendly and efficient customer support service that it provides to its users.

A big challenge faced by Timberline is to increase acceptance for its products after moving to a graphical user interface (GUI) environment. The company has had tremendous success with its Construction Gold product and GUI development effort is under way for the Estimating, Property Management, and Architects & Engineers product line.

COMPANY PROFILE

TOTAL SYSTEM SERVICES, INC.

1200 Sixth Avenue
P.O. Box 1755
Columbus, GA 31902-1755
(404) 649-2310

Richard W. Ussery, Chairman and CEO
Majority Owned Subsidiary of Columbus
Bank and Trust Company
Total Employees: 1,245 (12/91)
Total Revenue, Fiscal Year End
12/31/91: \$112,361,000

The Company

Total System Services, Inc. (TSYS) provides bankcard processing and associated services to the banking and finance industry. Bankcard processing services and equipment leasing provided to its parent/affiliates represented approximately 1% of 1991 revenue.

- TSYS was formed in January 1983 as a successor to the bankcard and general bank data processing operations conducted by the Total System Services Division and the data processing and purchasing departments of Columbus Bank and Trust Company (CB&T).
- In August 1983, TSYS issued 520,000 shares of common stock in an initial public offering. TSYS now operates as an 81.8% owned subsidiary of CB&T, which is a wholly owned subsidiary of Synovus Financial Corp. TSYS common stock was traded in the over-the-counter market until June 1989, when the stock began trading on the New York Stock Exchange.
- Through 1989, TSYS also provided general bank processing services to CB&T and several of its affiliate banks. In January 1990, TSYS completed the sale of its bank data processing operations to Synovus Data Corp., a newly created wholly owned subsidiary of Synovus, for approximately \$1.5 million. The sale allows TSYS to devote its full resources to the expansion and development of card-related services.
- TSYS management states that the company is the second largest third-party bankcard data processor in the U.S.

INPUT LIBRARY

TSYS had total 1991 revenue of \$112.4 million, a 34% increase over 1990 revenue of \$83.9 million. Net income rose 20%, from \$12.7 million in 1990 to \$15.2 million in 1991. A five-year financial summary follows:

**TOTAL SYSTEM SERVICES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR					
	1991	1990	1989	1988	1987	CAGR
Revenue	\$112.4	\$83.9	\$65.9	\$56.2	\$46.3	25%
· Percent increase from previous year	34%	27%	17%	21%	27%	
Income before taxes	\$24.3	\$20.3	\$17.4	\$15.4	\$12.9	17%
· Percent increase from previous year	20%	17%	13%	20%	24%	
· Gross margin	22%	24%	26%	27%	28%	
Net income	\$15.2	\$12.7	\$11.3	\$9.5	\$7.2	21%
· Percent increase from previous year	20%	12%	19%	33%	37%	
· Net margin	14%	15%	17%	17%	16%	
Earnings per share	\$0.96	\$0.80	\$0.71	\$0.60	\$0.45	21%
· Percent increase from previous year	20%	13%	18%	33%	36%	

Bankcard processing services accounted for nearly 92% of TSYS' 1991 revenue. As a result of the growth in the number of customer accounts processed by TSYS and the increased use of bankcards worldwide, revenues related to these services have continued to increase.

- The average number of bankcard cardholder accounts processed was approximately 23.6 million in 1991, 16.5 million in 1990, and 12.5 million in 1989.
- The growth in cardholder accounts is attributed to the addition of several new significant customers, and portfolio acquisitions and normal portfolio growth of existing customers, reflecting a nationwide trend of consolidation of credit card portfolios and increased use of third-party processors.
- Additional growth has been provided from TSYS customers offering new card services such as ATM, debit, private label, premium, and corporate cards.

- As of December 31, 1991, the number of bankcard customer accounts processed by TSYS had increased to 27.0 million, up 28% from 21.0 million at year-end 1990.
- Total cardholder accounts, including both bankcard customers and facilities management customer accounts, were approximately 27.1 million, 22.5 million, and 15.5 million at year end for 1991, 1990, and 1989, respectively.
- The number of merchant accounts processed by TSYS was 314,000 at year-end 1991, compared to 283,000 and 268,000 at year-end 1990 and 1989, respectively. Merchant accounts produce a higher volume of transactions and item charges per account than regular cardholder accounts and, as a result, contribute more revenue per account.
- By December 31, 1991, TSYS was processing 558,000 facilities management (systems operations) service transactions, as compared to 1.5 million and 1.3 million at year-end 1990 and 1989, respectively.

In March 1990, TSYS and Synovus signed agreements with a subsidiary of AT&T under which a newly formed wholly owned banking subsidiary of Synovus issues a credit card with either a VISA or MasterCard affiliation under the name "The AT&T Universal Card."

- TSYS is the exclusive provider of processing services for the credit card. Since 1990, AT&T has become a major customer of TSYS, with over seven million cardholder accounts on file as of December 31, 1991 and contributing 24.5% to TSYS' 1991 revenue.
- Under the agreement, AT&T has the right to purchase up to 1.5 million newly issued shares of TSYS common stock.

As of December 31, 1991, TSYS had 1,245 employees. The company currently has 1,291 employees.

The company's major competitor is First Data Resources (a subsidiary of American Express).

Key Products and Services

A three-year summary of source of revenue follows:

TOTAL SYSTEM SERVICES, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

	FISCAL YEAR					
	1991		1990		1989	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Noncaptive revenue						
- Bankcard processing	\$101.7	90%	\$72.4	86%	\$53.0	80%
- Facilities management	5.3	5%	5.7	7%	4.5	7%
- Equipment leasing	1.7	2%	1.8	2%	1.7	3%
	\$108.7	97%	\$79.8	95%	\$59.2	90%
Captive revenue						
- Bankcard processing	\$1.2	1%	\$1.0	1%	\$0.9	1%
- Other processing (a)	--	--	--	--	4.2	6%
- Equipment leasing	0.3	--	0.3	--	0.3	--
	\$1.5	1%	\$1.3	2%*	\$5.4	8%*
Other operating income	\$2.1	2%	\$2.8	3%	\$1.2	2%
TOTAL*	\$112.4	100%	\$83.9	100%	\$65.8	100%

* Differences due to rounding

(a) Includes operations sold to Synovus in January 1990.

TSYS provides a complete line of bankcard processing services, marketed as "The Total SystemSM", including card production, international and domestic financial settlement, cardholder statement preparation, collection information, customer service support, merchant accounting, credit scoring, on-line credit bureau reporting, and management information and reporting, to 110 card-issuing institutions located in the U.S., Puerto Rico, and Canada.

- In its bankcard processing operations, TSYS primarily processes cardholder accounts for customers issuing VISA, VISA Gold, MasterCard, and MasterCard Gold credit cards; VISA and MasterCard debit cards; cards for automated teller machines; private label cards; corporate cards; cards issued by affinity groups, such as motor clubs, insurance companies, and universities; and for customers extending executive and consumer equity lines of credit.
- Bankcard processing services are provided through a national network of on-line computer terminals and data transmission equipment. During 1991, this on-line network supported over 30,000 remote CRT terminals located at the facilities of various customers serviced by TSYS.

- TSYS customers can receive on-line credit reports from five major credit bureaus in a common format directly through The Total System, rather than having to communicate separately with each bureau.
- TSYS processed 900 million cardholder transactions during 1991, compared to 686 million in 1990 and 587 million in 1989.
- During 1991, TSYS completed the conversion and consolidation of the C&S/Sovran portfolio of accounts to the Total System, representing one of the largest conversions ever completed by the company. In early 1992, C&S/Sovran and NCB (Texas), both TSYS customers, merged. Combined revenues from the two institutions represented 11% of TSYS' total 1991 revenue.
- During 1990, TSYS also signed an agreement with Circuit City Stores to provide processing services for Circuit City's new private label card. TSYS continues to explore opportunities in the retail industry.

Equipment leasing services are provided by Columbus Depot Equipment Company, Inc., a wholly owned subsidiary of TSYS.

Industry Markets

Approximately 1% of TSYS' 1991 revenue was derived from services provided to CB&T and its affiliates. Of the remaining 99% of revenue, approximately 95% (\$106 million) was derived from the banking and finance industry and 5% (\$53 million) was derived from oil companies, airlines, and retailers.

AT&T Universal Card Services Corporation, a subsidiary of AT&T, contributed 24.5% (27.5 million) and 16.7% (\$14 million) to TSYS' 1991 and 1990 revenue, respectively.

The combined revenues of NCB and C&S/Sovran, two TSYS customers that merged in 1992, accounted for 11% (\$13.6 million) and 7.9% (\$6.6 million) of TSYS' total revenue in 1991 and 1990, respectively.

Geographic Markets

Virtually all of TSYS' 1991 revenue was derived from the U.S. A small amount was derived from Puerto Rico and Canada.

The company's sales office and production centers are located in Columbus.

In November 1990, TSYS opened a satellite development center in Atlanta (GA) to handle immediate needs for experienced programmers.

During 1991, TSYS completed construction of a new, \$20 million, 200,000 square foot product center in North Columbus. This facility houses computer operations, statement printing and mailing operations, microfiche production, central supply storage, and other related operations.

Computer Hardware

TSYS has the following computers installed in support of its processing services:

- 1 IBM 9020-620
- 1 IBM 3090-600E
- 1 IBM 3090-500E
- Tandem NonStops

- TRANSMAN software pricing is based on the number of units, number of shop locations, and hardware supported.
- IBM and compatible microcomputers: TRANSMAN modules range in price from \$995 to \$14,000 and total system (all modules) prices range from \$5,500 to \$50,000.
- IBM System/38 and AS/400: TRANSMAN software system prices range from \$25,000 to \$65,000.
- TRANSMAN source code is also available.
- There are currently over 300 TRANSMAN clients and 1,000 users.

TMT also provides enhancements, custom programming, training, on-site installations, and telephone consultations at a negotiated price. Annual maintenance contracts are available for 15% of the software purchase price.

Industry Markets

TMT has clients in the trucking/transportation, distribution, construction, utilities, and city government markets, as well as clients in other industries that have distribution centers and plants that require maintenance.

Clients include American Refuse, AGA Gas, Dobbs International, Driggs Construction, Coca-Cola Bottling, Kraft, Smith Dairy, Florida Mining, Keen Leasing, Hallibarton Services, Schwebel Baking, Armored Transport, Atlanta Beverage, Laidlaws, Pepsi-Cola, American Bakeries, U.S. Trucking, United Truck Lines, Safeway Stores, the City of Grand Junction, the City of Pueblo, Cleveland Public Schools, Diversified Products, The Toronto Star, Central Canada Grocers, K-Mart Stores, and Von's Groceries.

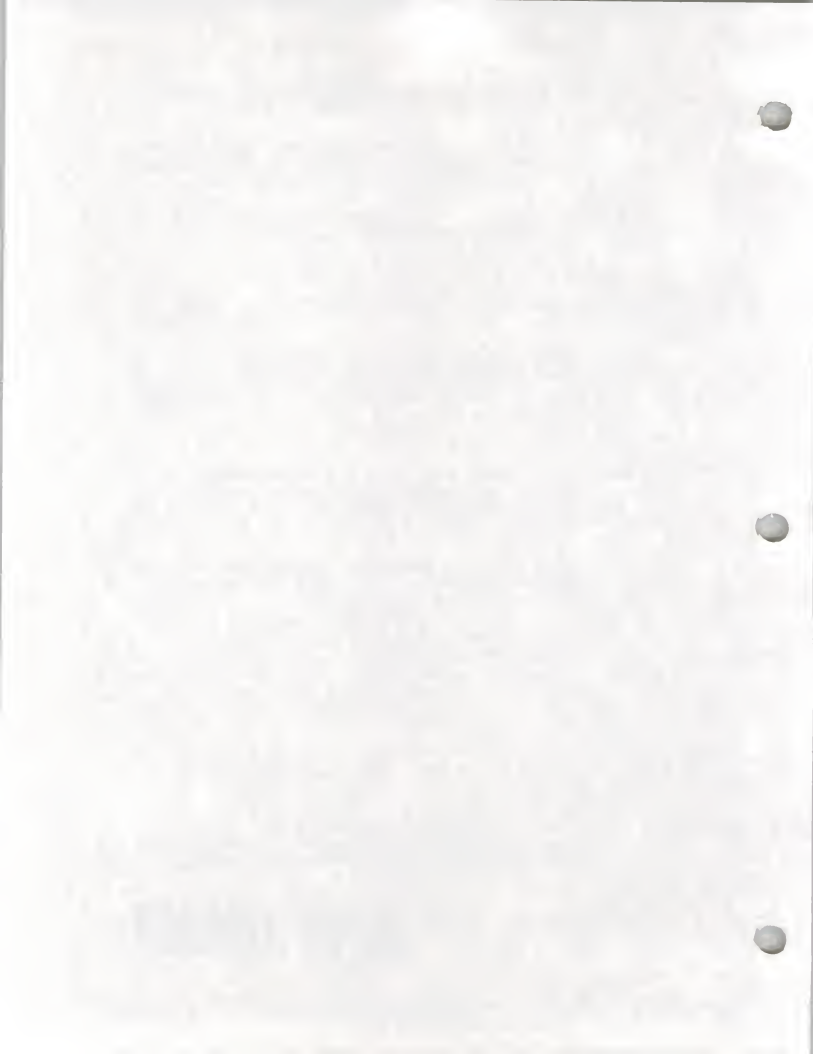
Geographic Markets

Approximately 85% of TMT's revenue is derived from the U.S., 10% from Canada, and the remaining 5% from Europe.

Computer Hardware

TMT has one IBM AS/400 and approximately 25 IBM microcomputers installed at its headquarters. These machines are used for research and development and customer support.

INPUT LIBRARY



TRAX SOFTWARES, INC.

5840 Uplander Way
Culver City, CA 90230-6620
Phone: (310) 649-5800
Fax: (310) 649-6200

President:

Leonard Fischer

Status:

Private

Total Employees:

10

Total Revenue:

\$2,000,000*

FYE:

1/31/92

*INPUT estimate

Key Points

- Trax Softworks, Inc. specializes in personal productivity software applications for end users in the corporate environment.
- Trax Softworks developed a fully functional word processor for PROFS, IBM's groupware system.
- Trax Softworks targets the end user in corporate computing environments.

Company Description

Trax Softworks, Inc., established in 1981, specializes in personal productivity tools for end users in a corporate computing environment. Trax Softworks' software products support IBM's 370 architecture as well as 327-type IBM terminals in VM/CMS, TSO (MVS and MVS/XA), CICS (DOC and MVS), and ADR/ROSCOE environments.

Financials

INPUT estimates that Trax Softworks' total fiscal 1992 revenue was approximately \$2 million.

Employees

As of January 1992, Trax had approximately 10 employees, segmented as follows:

Marketing and sales	2
Customer support	2
Research and development	4
Computer operations	1
General and administrative	<u>1</u>
	10

Competitors

Trax Softworks' major competitors include IBM and Napersoft.

Key Products and Services

Approximately 80% of Trax Softworks' fiscal 1992 revenue was derived from applications software products and 20% from professional services.

Trax Softworks' software is compatible with the following environments: IBM 370, 30XX, 43XX, 9370, TSO (MVS and MVS/XA), VM/CMS, CICS (DOS and MVS), and ADR/ROSCOE. Products include the following:

- ESS[®], released in 1983, is a decision support tool featuring interactive 3-D spreadsheets, Lotus compatibility, mainframe file access, graphics support, and macro processing.
- There are currently 500 installations of ESS, and it can be purchased for a one-time fee of \$7,750 to \$35,440. Leasing is available starting at \$3,100 to \$14,180 per year.
- EdWord[®], released in 1986, is a "what-you-see-is-what-you-get" word processor. It can function as a standalone system or be integrated with the ESS spreadsheet.

- There are currently 50 installations of EdWord, and it can be purchased for a one-time fee of \$6,200 to \$28,350. Leasing is available starting at \$3,100 to \$14,180 per year. Maintenance fees are 15% of purchase price per year.
- A PROFS version of EdWord was released in 1991. The product adds value to existing PROFS and OfficeVision installations by providing an easy-to-use word processor.

Trax Softworks provides other services, as follows:

- Customer training. Classes are held either at Trax headquarters or at the client site.
- A help desk hotline.
- The Trax User Group (TUG) is composed of Trax software customers.

Strategy

ESS and EdWord can be integrated into third-party and in-house software via an Application Programming Interface (API). Applications include adding EdWord as the text editor for letter writing or as the purchase order creator for inventory systems. This product strategy developed as customers moved some applications to personal computers and in addition, wanted to update mission-critical applications still residing on the mainframe host.

Industry Markets

Trax Softworks markets its products to many industries, including the insurance, retail, manufacturing, utilities, publishing, state and local government, federal government, transportation, entertainment, universities, and aerospace industries.

Geographic Markets

Approximately 90% of Trax Softworks' fiscal 1992 revenue was derived from the U.S. and the remaining 10% from Europe, the Middle East, and South America.

Trax Softworks has distributors in Europe, the Middle East, and South America.

Computer Hardware and Software

Trax Softworks has the following hardware installed at its headquarters:

- 1 IBM 4341 Model 2 mainframe, operating under VM/CMS with TSO (MVS and MVS/XA) AND CICS (DOS)
- 60 IBM terminals, including 3270s, 3178s, and 3180s
- 15 IBM PCs
- 5 Macintoshes

Trax Softworks has the following software installed:

- EdWord, word processor
- ESS, electronic spreadsheet
- GDDM, IBM's graphics support
- Script, IBM's word processor

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1996

Triad Group plc

Weyside Park
Catteshall Lane
Godalming, Surrey
GU7 1XE
United Kingdom
Tel: +44 (0) 1483 860 131
Fax: +44 (0) 1483 860 198

Chairman:	Robert Drummond
Status:	Public
Number of Employees (February 1995):	225
Revenue (FYE 31/3-96):	£11.7 million
Founded:	1988

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Key Points

- Triad has shown profitable growth since it was founded
- The company floated successfully in March 1996 and is continuing its growth
- Triad is making a transition from government sector to the commercial sector

Company Description

Triad Group was founded in 1988. The founders, Dr J.C. Riggs and Dr. M.C. Faulkes acquired a profitable division of a computing services company that had gone into liquidation. The manager of the division,

Alistair Fulton is today the managing director of Triad Group.

At the time of the acquisition Triad was providing systems consultancy and development services to commercial and central government clients. Triad then went through a phase where it concentrated its efforts on central government projects since this would maximize the use of existing skills.

As Triad has grown in the past five or six years, the company has again started pursuing opportunities in the commercial sector.

Today, Triad offers a broad range of IT services and is also active in the IT specialist contract staff market.

Triad floated on the London Stock Exchange in March 1996.

Operations and Structure

Triad is divided in to two divisions:

- Triad – which covers all the IT services activities; and
- Generic – which provides experienced technical consultants on a contract basis.

Exhibit 1 shows Triad's key management personnel. The majority of the company's directors and senior management have been with Triad since its inception.

Exhibit 1

Triad's Key Management Personnel

Name	Function
Alistair Fulton	Managing director
Mira Makar	Executive deputy chairman and finance director
Tim Eglén	Operations director
Ian Haynes	Managing director, Generic division
Keith Stoker	Commercial business manager
Gary Newell	Government business manager
Fiona Yeomans	Contracts manager
Richard Jeffrey-Cook	Independent project monitor

Source: INPUT

Triad further has three additional business managers that are responsible for generating sales and supervising projects.

Company Strategy

Triad's strategy is firmly based on the development of long-term relationships with clients. The company claims that a large proportion of its business is repeat business from existing clients or generated from client referrals. This situation means that Triad can be – and is – selective of the number of tendering situations in which it takes part.

While the company focusing on the government sector during the early part of the 1990s, Triad is now expanding its business in the commercial sector. The company's focus markets are:

- central government and public agencies
- travel and transport
- media and telecommunications
- retail
- banking and finance
- pharmaceuticals.

Triad has extended its activities to include IT contract staff with the acquisition of Generic Software Consultants in October 1995. The staff in Generic's database can now ensure that Triad will have the required resources to pursue a growth strategy in the commercial sector.

Financial Information

Exhibit 2 shows a three-year summary of Triad's revenues and profits.

The company has grown steadily since it was acquired in 1988 for £53,000. During the 1990s, Triad has grown by around 30% per year and the 75% increase in revenues from 1995 to 1996 is for a large part due to the Generic acquisition. Generic was bought for a price around £2.8 million.

Triad was floated in March 1996 at a price of 135 pence, giving a market valuation of £34 million. The share price, as of 3 December, was 184 pence per share, up around 36% since floatation.

Exhibit 2

Triad Group plc Three-Year Financial Summary 1994 to 1996, (£ million) (FYE 31-03)

Year	1994	1995	1996
Revenue	5.1	6.7	11.7
Annual Growth Rate	34%	31%	75%
Profit before Tax	1.02	1.06	2.13
Average number of employees	n/a	116	161
Revenue per Employee (£'000)	n/a	58	73

Source: INPUT

Market Analysis

Exhibit 3 shows INPUT's estimates of Triad's revenues by delivery mode.

Exhibit 3

Triad's Revenues by Delivery Mode, 1996

Delivery Mode	Revenues in \$ Millions	Share
Application Software Products	1.9	10%
Systems Integration	3.6	20%
Professional Services	12.7	70%
Total Software & Services	18.2	100%

Source: INPUT Estimates
Percentages are rounded

Exhibit 4 shows Triad's activities by vertical market. The company is especially strong in the public sector.

Exhibit 4

Triad's Revenues by Industry Sector, 1996

Industry Sector	Revenues in \$ Millions	Share
Government	11.8	65%
Travel & Transport	1.0	5%
Communications	1.8	10%
Retail	1.0	5%
Banking & Finance	1.8	10%
Pharmaceuticals	0.8	5%
Total Software & Services	18.2	100%

Source: INPUT Estimates
Percentages are rounded

All Triad's revenues are generated in the UK. At this time the company has no immediate plans for geographical expansion.

Key Product and Services

Triad offers a broad range of IT services, primarily

- strategic consultancy
- information systems consultancy
- software development
- systems integration
- support of operational systems
- contract supply of software programmers and consultants.

Triad uses mainstream software technology on which it develops specialized and customized solutions for its clients. The company will then often use these solutions to market its skills with other companies or government agencies.

Triad uses widely used methodologies for project management and implementation projects. The company has not developed its own methodologies.

The main type of contract that Triad offers is Time & Material. The company estimates that only around 15% of its revenues are generated on a fixed term basis.

Exhibit 5

Major Clients and Projects

Sector	Company
Central Government and Public Agencies	<p>Department of the Environment: The development, national roll-out, and on-going support of and office administration system for the Rent Office Service</p> <p>Intervention Board: development of Milk Quota management system for the government body that regulates the EU quota systems</p> <p>Medicines Control Agency: design and development of a system (BLIS) that holds details of UK pharmaceutical manufacturers and wholesalers, tracks license applications and provides information for determining UK policy on medicines</p>
Telecommunications	<p>Guernsey Telecoms: development and implementation of customer care and billing systems</p> <p>Mercury Communications: provision of contract IT consultants</p>
Travel and Transport	BAA and Passenger Transport Executives: development of public information system to transport and infrastructure operators
Banking and Finance	NatWest Markets: provision of contract IT consultants

Source: INPUT

Recent Projects and Major Clients

Triad has a strong basis in the government market but has over the past few years increased its activities in the commercial sector.

Exhibit 5 details some of Triad's major clients and give short details of the projects.

INPUT Assessment

Triad differs dramatically from other small IT services companies. The company has managed to grow in a very controlled manner, turning in respectable increases in revenues and profits. It is typical for companies of this size to grow at a much quicker pace — often with the effect of turning in losses.

Triad has a good basis for growing its business into the commercial sector and possibly also outside the UK. A closer look at some of the projects that Triad has undertaken indicates that the company should have strong skills which it can easily use to expand outside the UK. Alternatively, Triad can use its expert knowledge and skills to form alliances with other services companies

However, the company's management is prudent and enters new contracts only after careful consideration. Although this is positive to some extent, Triad's management must be willing to take some well-calculated risks or the company will remain an "also ran".



COMPANY PROFILE

Input

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TRINZIC CORPORATION

101 University Avenue
Palo Alto, CA 94301
Phone: (415) 328-9595
Fax: (415) 321-7728

Chairman:	Robert N. Goldman
CEO:	James R. Gagnard
President:	Frank Chisholm
Status:	Public Corporation
Total Employees:	280
Total Revenue:	\$41,344,000
Fiscal Year End:	3/31/93

Key Points

- Trinzic, formed by the merger of AICorp, Inc. and Aion Corporation in September 1992, offers application development software products and services for business process automation.
- The acquisition of Channel Computing in March 1993 launched Trinzic into the client/server marketplace. Products acquired included Forest & Trees, an award-winning client/server data analysis and reporting tool for DOS and Windows, and InfoPump, a new middleware product for building and implementing data routing applications.
- In the first quarter of fiscal 1993, Trinzic announced InfoHub, the cornerstone of its emerging client/server product line. The cross-platform product is designed to access and update legacy information stored in relational and nonrelational data bases on mainframes using PC-based applications and front-end query and report writing tools.
- During fiscal 1993, Trinzic enhanced its international market presence with the acquisition of its distributors in Australia and the Benelux countries as well as the addition of several new distributors throughout Europe and South America.

**Company
Description**

Trinzic Corporation develops, markets, and supports software application development tools and services to automate business processes.

Trinzic's cornerstone products are used to develop business process automation (BPA) applications to automate business decision-making processes that require judgments and incorporate an organization's policies, experience, and knowledge. Examples of such business processes include insurance underwriting, product pricing, production scheduling, and credit authorization.

Trinzic currently has a combined installed base of over 1,300 customers, representing more than 10,000 software licenses worldwide for its BPA products, and over 4,000 customers and more than 25,000 licenses for its general-purpose client/server tools.

Trinzic was formed in September 1992 with the merger of AICorp, Inc. of Waltham (MA) and Aion Corporation of Palo Alto (CA), bringing together two leading vendors of application development software for business process automation.

- AICorp, formed in 1975, developed and marketed knowledge-based/CASE application development tools, including the KBMS programming environment and the INTELLECT natural language system. AICorp had approximately 170 employees at the time of the acquisition and revenues of \$19.7 million for the fiscal year ending March 31, 1992.
- Aion Corporation, founded in 1984, developed and marketed the Aion Development System (AionDS), a business process automation application development tool. Aion had approximately 155 employees at the time of the acquisition and annual revenues of about \$20 million.

Strategy

Trinzic is in the process of evolving its business and product line in response to an industry move toward distributed processing and an increasing need for client/server tools. Through the acquisition of Channel Computing, Trinzic expanded into the general-purpose client/server tools market.

Plans for fiscal 1994 include implementing a quality improvement program; continuing to leverage revenue-generating areas such as consulting services, the Affiliates Program, and international business; releasing new client/server products, including InfoHub; and new releases of InfoPump, Forest & Trees, AionDS, and KBMS.

Financials

Trinzic's fiscal 1993 revenue reached \$41.3 million, a 4% increase over fiscal 1992 revenue of \$39.8 million.

- Net losses of \$8.9 million for fiscal 1993 include restructuring charges of \$7.9 million and merger transaction costs of \$2.2 million associated with the AICorp/Aion merger and the Trinzic/Channel merger.
- In the five-year summary that follows, financials have been restated to reflect the pooling of interests of AICorp and Aion in September 1992 and the merger of Trinzic and Channel in March 1993:

**TRINZIC CORPORATION
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	3/93	3/92	3/91	3/90	3/89
Revenue	\$41.3	\$39.8	\$39.9	\$29.2	\$20.2
• Percent change from previous year	4%	--	37%	45%	N/A
Income (loss) before taxes	\$(8.9)	\$(8.0)	\$(1.6)	N/A	N/A
• Percent change from previous year	(a) (11%)	(b) (400%)	N/A	N/A	N/A
Net income (loss)	\$(8.9)	\$(11.7)	\$(2.1)	\$(1.4)	\$0.1
• Percent change from previous year	24%	*(457%)	(50%)	*	N/A
Earnings (loss) per share	\$(0.49)	\$(0.70)	\$(0.14)	\$(0.11)	\$.01
• Percent change from previous year	30%	(400%)	27%	*	N/A

* Percent change exceeds 1,000%.

- (a) Includes restructuring charges of \$7.9 million and transaction costs of \$2.2 million associated with the AICorp/Aion and Trinzic/Channel mergers.
- (b) Includes \$1.2 million write-off associated with discontinuing the 1st-CLASS product line.

Approximately 49% of Trinzic's fiscal 1993 was derived from systems software product licenses, 37% from software maintenance fees, and 14% from training and consulting professional services. A three-year source of revenue summary follows:

TRINZIC CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	3/93		3/92		3/91	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software product licenses	\$20.4	49%	\$22.3	56%	\$26.7	67%
Maintenance	15.1	37%	13.2	33%	10.3	26%
Training, consulting, and other	5.8	14%	4.3	11%	2.9	7%
TOTAL	\$41.3	100%	\$39.8	100%	\$39.9	100%

Trinzic management attributes fiscal 1993 results to the following:

- Software product license revenue decreased nearly 9% due to a transition in the company's sales strategy away from mainframe products and toward PC and workstation products. Unit sales and revenues from higher priced mainframe products have declined, while unit sales and revenue from lower priced PC Starter Kits and workstation copies have increased.
- Maintenance revenue increased nearly 15%, due primarily to the increasing base of customers with installed systems who purchase maintenance agreements from Trinzic.
- Training, consulting, and other revenues increased by 37%, due primarily to the success of Trinzic's expanded consulting organization.
- Research and development expenses were \$6.4 million in fiscal 1993, compared to \$7.8 million in fiscal 1992. The decrease primarily reflects the elimination of redundant activities due to the merger, including discontinuing certain development activities, and a reduction in workforce.

Revenue for the three months ending June 30, 1993 reached nearly \$10.1 million, compared to \$9.4 million for the same period in 1992. Net income reached \$169,000, compared to net losses of \$1.3 million for the same period a year ago.

Market Financials

Trinzic markets its products across industry sectors and has clients in manufacturing, financial services, retail, insurance, transportation, telecommunications, and government.

Geographic Markets

Approximately 81% of Trinzic's fiscal 1993 revenue was derived from North America and 19% from international sources. A three-year geographic source of revenue summary follows:

**TRINZIC CORPORATION
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	3/93		3/92		3/91	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
North America	\$33.3	81%	\$33.5	84%	\$35.4	89%
International	8.0	19%	6.2	16%	4.5	11%
TOTAL	\$41.3	100%	\$39.7	100%	\$39.9	100%

**Operations/
Structure**

Trinzic has North American offices in the metropolitan areas of Atlanta, Boston, Chicago, Dallas, Denver, Detroit, Los Angeles, Minneapolis, New York, Philadelphia, Palo Alto, Toronto, and Washington, D.C.

International subsidiaries are in the U.K., Australia, Belgium, France, and Germany.

Employees

As of June 1993, Trinzic had 280 employees, segmented as follows:

Marketing, sales, and support services	177
Research and development	70
Corporate finance and administration	33
	280

Acquisitions

In March 1993, Trinzic acquired Channel Computing, Inc. of Portsmouth (NH) for approximately 1.9 million shares of Trinzic common stock in a pooling of interests transaction.

- Channel Computing was founded in 1988 to develop client/server applications that support more informed decision making. Its products include Forest & Trees[®], a client/server data analysis and reporting tool, and InfoPump[™], a middleware product for routing, integrating, and synchronizing dissimilar types of data.
- Channel Computing had approximately 34 employees at the time of the acquisition and annual revenue of about \$4 million.
- The acquisition added an installed base of over 4,000 customers and more than 25,000 software licenses.

During fiscal 1993, Trinzic acquired its distributors in Australia and Belgium.

Key Products and Services

Trinzic offers a range of application development tools and services that assist companies in developing client/server applications.

Software Products:

The Aion Development System (AionDS) is a business process automation application development tool for building, delivering, and maintaining logic-intensive applications. It is oriented toward applications that have a higher transaction volume or are embedded in legacy systems.

- Data base interfaces are available for DB2, IMS DB, VSAM, DBC/1012, SQL/DS, DB2/2, ORACLE, MS SQL Server, and Sybase SQL Server.
- AionDS runs on IBM mainframes, IBM and compatible PCs, and Sun SPARC systems. Operating systems supported include MVS, VM, MS-DOS, OS/2, Windows 3 and Sun OS.
- Prices for AionDS range from \$105,000 to \$150,000 for development copies, \$70,000 to \$105,000 for server versions, and \$40,000 to \$60,000 for execution systems.
- There are currently over 800 customers of AionDS worldwide.

KBMS provides a complete programming environment for the development, implementation, and maintenance of automated business process applications.

- KBMS uses an inference engine that implements a set of reasoning methodologies and applies them to a knowledge base. KBMS also supports object-oriented programming techniques.
- Facilities for interaction by the user include a graphical user interface, a conversational English language interface, and a traditional forms-oriented interface.
- KBMS also includes application developer and application program interfaces.
- Data base interfaces are available for DB2, IMS DB, CA/IDMS DB, DBC/1012, ADABAS, SQL/DS, VSAM, KDB (KBMS), Sequential, DB2/2, MS SQL Server, ORACLE, Rdb, Sybase SQL Server, and RMS.
- KBMS runs on IBM mainframes, IBM and compatible PCs, DEC VAX systems, and Sun SPARC systems. Operating systems supported include MVS, VM, VMS, OS/2, Windows 3, and Sun OS.
- Prices for the KBMS system range from \$105,000 to \$150,000 for development copies, \$70,000 to \$105,000 for server versions, and \$40,000 to \$60,000 for execution systems.
- There are currently over 700 customers of KBMS worldwide.

INTELLECT is a natural language system that enables users to access information stored in corporate data bases through the use of conversational English questions. While the natural language technology of INTELLECT is embedded in KBMS, INTELLECT is available as a standalone product on IBM mainframes and PCs.

- Data base interfaces are available for DB2, IMS DB, CA/IDMS DB, DBC/1012, ADABAS, VSAM SQL/DS, KDS (KBMS), Sequential, DB2/2, MS SQL Server, ORACLE, Rdb, Sybase SQL Server, and RMS.
- INTELLECT is available for IBM mainframes, IBM and compatible PCs, DEC VAX systems, and Sun SPARC systems.
- INTELLECT system prices range from \$70,000 to \$105,000 for development copies, \$50,000 to \$75,000 for server versions, and \$40,000 to \$50,000 for execution systems.

Forest & Trees is a decision support tool used to develop executive information systems and ad hoc query and reporting applications.

- Forest & Trees collects, combines, monitors, analyzes, and acts upon information from a variety of sources, including PC spreadsheets and data bases, data base servers, and host systems.
- Forest & Trees requires 80286 or higher workstations with DOS version 3.0 or later, and Windows 3.0 or later.
- The standard edition of Forest & Trees, which interfaces with Lotus 1-2-3, Excel dBase, R:BASE, Paradox, DataEase Q&A, Btrieve, Lotus Notes, and ASCII flat files, is priced at \$695.
- The client/server edition, which provides access to additional server-based data bases, including DB2 via the Micro Decisionware Gateway, Ingres, Oracle Server, Gupta SQL Server, and Microsoft/Sybase SQL Server, is priced at \$790.
- Over 25,000 copies of Forest & Trees have been shipped, bringing in annual product line revenues in excess of \$3.4 million.

InfoPump is a client/server application development tool to develop and implement data routing applications that enable numerous types of data, in different formats, to be moved from one data base to another.

- InfoPump components include:
 - InfoPump Manager, a Windows-based application development environment
 - Internal Database, which store instructions necessary for the data routing and transformation processes
 - InfoPump Server, which periodically downloads information from the source data bases, performs necessary data transformation operations, and moves the data to a destination data base where it is made accessible to the EIS, DSS, or other end-user application
 - Data base interfaces for IBM DB2/2, DBM, and SQL/400; Lotus Notes; Novell NetWare SQL; Rdb; Gupta SQLBase; Microsoft SQL Server; and Sybase
- InfoPump requires an OS/2-capable server and a Windows-capable workstation 386 or higher, Microsoft or Sybase SQL Server version 1.1 or later.

- A copy of InfoPump must be licensed for each server computer on the network, at prices ranging from \$20,000 to \$25,000. A copy of Microsoft/Sybase SQL Server must be licensed separately at additional cost. Additional data base interfaces and InfoPump Managers are licensed separately, at \$2,500 per server data base.
- InfoPump was released in March 1992 and began distribution through the Trinzic sales force in April 1993.

InfoHub, released in 1993, is a mainframe-based system that allows users to transparently access and update a range of host-based relational and nonrelational data bases using many PC-based applications or front-end query and report writing tools.

- InfoHub reduces costs associated with downsizing, promotes sharing and reuse of data by making mainframe data as accessible as server data, and offers PC users flexible data access while maintaining control over the data.
- Hardware/software requirements for InfoHub include the following:
 - Mainframe environment: CICS version 1.7 or higher, VTAM version 3.2 or higher, and MVS/XA or MVS/ESA
 - Gateway environment: Micro Decisionware software
 - Network environment: Any Micro Decisionware-supported network, including Novell, LAN Manager, and others
 - Client environment: 386 or higher or equivalent PC running Windows version 3.1 and client software must be ODBC compliant

Support Services:

Trinzic offers training and consulting services to help customers in the development and delivery of their client/server applications created using Trinzic's software tools.

- Training classes are offered at Trinzic training centers as well as at client locations. Class prices range from \$375 to \$2,000 per student.
- Consulting services are available at \$1,500 per day. Package rates are available.

Trinzic's software tools include 90 days of maintenance. An annual service fee is available after expiration of the initial maintenance

period for prices ranging from 15% to 20% of the then-current software license fee.

Marketing and Sales

Trinzic markets its products in North America through a direct sales force with sales and support offices in 13 cities.

Trinzic markets its products outside of North America through wholly owned subsidiaries in the U.K., Germany, France, Australia, and Belgium, and through independent distributors in Brazil, Italy, Finland, Spain, and South Africa.

Trinzic also has various strategic marketing relationships with over 25 computer hardware manufacturers, software vendors, and consulting organizations, as described in the Alliances section below.

Alliances

Trinzic has established the Trinzic Affiliates Program to extend its reach into a variety of markets and to maintain product compatibility with other industry leaders. These include the following:

- IBM's Business Partner Application Specialist Program
- DEC's Complementary Software House and Complementary Marketing Programs
- Oracle's Independent Solutions Vendor Program
- The Sybase Synergy Partnership
- The Sun Catalyst Program

Trinzic also has partnerships with Borland, Lotus, Microsoft and others for PC file servers and spreadsheets; and Oracle, Sybase, Microsoft, Ingres, Gupta, Hewlett-Packard, IBM, and Novell for data bases.

Trinzic has joint marketing agreements with various vendors, including Stone & Webster Engineering, and Micro Decisionware.

Trinzic and Price Waterhouse, Andersen Consulting, and Coopers & Lybrand have strategic alliance agreements that provide for use of Trinzic's products for consulting engagements and internal production and the ability to be embedded within commercial products.

Clients

A sample of Trinzic's customers include Campbell Soup Company, La-Z-Boy Chair Company, General Mills Restaurants, Hudson's Bay, St. Luke's Episcopal Hospital, York International, TRW, Royal Bank of Canada, Carrier, Mutual of New York (MONY), Chevron, Blue Cross/Blue Shield of Missouri, Bankers Trust, International Flavors and Fragrances, Hewlett-Packard, Prudential Insurance, Pitney Bowes, Schlumberger, Marie de Paris, Deutsche Aerospace, British Telecom, Kolnischer Ruck, Norwich Union, BBV, Barclays Bank, Banque de France, Robeco, and SIP.

Competitors

Trinzic's competitors, by product line, include the following:

- Forest & Trees competes in two market segments: application development tools and end-user query and reporting tools. Given the increased competition from vendors of general-purpose application development tools such as Powersoft, Cognos, and Gupta, Forest & Trees has been positioned as an EIS/DSS application builder rather than a general application development tool. Trinzic expects increased competition in the ad hoc query and report tools segment from client/server tools vendors like Gupta and PC data base vendors, especially Microsoft and Borland, as they deliver new Windows-based data bases and report writers.
- InfoPump's principal direct competitor is Extract from Evolutionary Technologies. However, Extract is targeted at mainframe environments and does not currently support any server-based relational data bases.
- AionDS and KBMS have competition in several different areas, including direct international competition from vendors that sell business process automation and 4GL products.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program

July 1997

Trusted Information Systems

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Glenwood, MD 21738
U.S.

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Fax: (301) 854-5363
Internet: <http://www.tis.com>

Unit 8, Commerce Park
Brunel Road
Theale, Berks RG74AE
U.K.

Phone: 44 1189 30 4413
Fax: 44 1189 30 4412

Chairman, President, & CEO: Stephen T. Walker
Status: Public
Employees: 293 (7/97)
Revenue: \$26,370,081
Fiscal Year End: 12/27/96

Firewall and Gauntlet Global Virtual
Private Network (GVPN) products.

Key Points

- Trusted Information Systems (TIS) is a global provider of full-service security solutions for computer networks.
- In June 1997, TIS announced that it is developing security management tools designed for use with Microsoft[®] Proxy Server and the next version of Windows NT[®] Server.
- In April 1997, TIS launched its next generation of Gauntlet[®] network security solutions, including the new Gauntlet

Company Description

TIS, founded in 1983, provides full-service security solutions for protection of computer networks, including global Internet-based systems, internal networks, individual workstations, and laptops.

In October 1996, TIS completed its initial public offering of 2.9 million shares of common stock, raising approximately \$45.4 million. Out of the proceeds, the company repaid about \$4.9 million if its short-term borrowings and notes payable.

TIS currently has two operating divisions: the Commercial Division and the Advanced Research and Engineering ("AR&E") Division.

- The Commercial Division derives revenue from the company's Gauntlet® family of firewall products, from its commercial consulting services, and from its RecoverKey™ exportable cryptography enabling products. About 70% of the company's revenue is derived from the Commercial Division.
- The Advanced Research and Engineering Division consists primarily of research, development, and consulting in computer and related security systems.

Operations and Structure

Trusted Information Systems is headquartered in Glenwood (MD).

The company maintains offices in Los Angeles and Mountain View (CA), McLean (VA), and Rockville (MD).

The company's key executives are listed in Exhibit 1.

Exhibit 1

Trusted Information Systems Key Executives

Name	Title
Stephen T. Walker	Founder, President, CEO, Chairman, Director
Martha A. Branstad	EVP, Director, COO, President of AR&E Division
Harvey L. Weiss	EVP, Director & President, Commercial Division
Homayoon Tajalli	EVP, General Manager, Cryptographic Products
Ronald W. Kaiser	EVP, CFO
Fredrick M. Avolio	VP, Technology Marketing
Charles Baggett	VP, Commercial Consulting
Gina Dubbe	VP, Sales & Marketing
R. William Thompson	VP, Business Development

Source: Trusted Information Systems

TIS has wholly-owned subsidiaries as follows:

- Trusted Information Systems Limited, located in Berkshire (U.K.), was established in 1992 to conduct activities in the U.K.
- Trusted Information Systems GmbH, located in Munich (Germany), was established in 1996 to conduct activities in Germany.

Employees

As of July, 1997, TIS had approximately 293 employees worldwide, segmented as follows:

Marketing and sales.....	70
Customer support.....	41
Research and development	109
Computer operations	12
General and administrative	61
	293

The company currently has 276 employees located in the U.S. and 17 in Europe.

Company Strategy

TIS's mission is to provide computer and communications security solutions that enable corporations and government information systems to use the power of the Internet securely. Key elements of the company's strategy are to:

- Provide comprehensive security solutions at all levels
- Increase market penetration through multiple channels
- Expand consulting services
- Leverage government research and engineering into commercially available products

Financials

Total 1996 revenue reached \$26.4 million, a 46% increase over 1995 revenue of \$18.1 million. The company recorded net losses of \$2.2 million, compared to a net income of \$2.3 million in 1995.

A five-year financial summary is shown in Exhibit 2.

Research and development expenditures were approximately \$3.9 million (15% of revenue) in 1996, compared to \$1.1 million (6% of revenue) in 1995 and \$0.6 million (5% of revenue) in 1994.

Exhibit 2

Trusted Information Systems Three-Year Worldwide Financial Summary (\$ Millions except per-share and per-employee data)

Item	Fiscal Year				
	1996	1995	1994	1993	1992
Revenue	\$26.4	\$18.1	\$13.1	\$8.8	\$6.8
• Percent change from previous year	46%	38%	N/A	29%	N/A
Income (loss) before taxes	\$(3.6)	\$2.3	\$1.2	\$0.07	\$0.1
• Percent change from previous year	(259%)	90%	*	(42%)	N/A
Net income (loss)	\$(2.2)	\$1.3	\$0.7	\$0.4	\$0.7
• Percent change from previous year	(269%)	86%	99%	(52%)	N/A
Revenue per employee	\$90,000	N/A	N/A	N/A	N/A
Earnings (loss) per share	\$(0.25)	\$0.15	\$0.08	\$----	\$0.01
• Percent change from previous year	(267%)	88%	N/A	N/A	N/A

Source: Trusted Information Systems

* Percent change exceeds 1,000%.

Interim Results

Revenue for the six months ending June 27, 1997 reached \$17.5 million, an increase of 82% over revenue of \$9.6 million for the same period in 1996. The company experienced a net loss of \$3.1 million for the quarter, compared to a net loss of \$0.5 million the previous year.

- Losses were attributed to the expansion of the international marketing and distribution efforts and due to firewall and RecoverKey™ development activities.

- Commercial products revenue rose to \$11.0 million, an increase of 195% over revenue of \$3.7 million the previous year.
- Government contracts revenue was \$4.8 million for the period, compared to \$5.4 million during the same period in 1996.
- Commercial consulting services revenue rose to \$1.1 million for the period, from \$0.5 million during the same period in 1996.

Revenue Analysis by Product/Service

Approximately 52% of TIS's 1996 worldwide revenue was derived from commercial products, 42% from government contracts, and 6% from commercial consulting.

- Commercial product revenue increased 218% primarily due to increased sales of licenses of Gauntlet Internet Firewalls directly to customers and through the company's resellers.

- Government contract revenue fell 10% primarily due to the company's reallocation of personnel to its commercial activities.
- Commercial consulting services revenue increased 12% primarily due to the completion of a substantial number of commercial consulting contracts during the third and fourth quarters of 1996.

Exhibit 3 displays a three-year source of revenue summary.

Exhibit 3

**Trusted Information Systems
Three-Year Source of Worldwide Revenue Summary
(\$ Millions)**

Product/Service	Fiscal Year					
	1996		1995		1994	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Commercial products	\$13.6	52%	\$4.3	24%	\$1.0	8%
Government contracts	11.1	42%	12.3	68%	11.2	86%
Commercial consulting	1.7	6%	1.5	8%	0.9	7%
Total	\$26.4	100%	\$18.1	100%	\$13.1	100%

Source: Trusted Information Systems

Geographic Markets

The majority of TIS's revenue is derived from the U.S. Revenue from the company's European subsidiaries in 1996 was 4.0% of total revenue, compared to 3.1% of revenue in 1995.

Key Products and Services

Products

- In July 1997, TIS announced that its firewall technology is rated #1 in use and security on the Internet.
- In June 1997, TIS announced that the next version of Microsoft Proxy Server is being built with a security architecture that will

complement the TIS Gauntlet® Internet Firewall.

- In February 1997, TIS announced the availability for downloading of ForceField™ at its Web site. ForceField is TIS's new Web server security product that uses the Gauntlet firewall technology to protect sensitive data without compromising the high level of performance required of a Web server.
- The *Internet Firewall Toolkit* is a research-based collection of modules that can be used to build a firewall. It serves as the foundation for the company's Gauntlet family of firewall products and is available

free on the Internet for use, but not for resale. This product was introduced in the fourth quarter of 1993.

- The *Gauntlet Internet Firewall* is an application gateway firewall that protects internal networks from external intrusion. This product was introduced in the second quarter of 1994.
- The *Gauntlet Intranet Firewall* was introduced in the second quarter of 1996. It is the distributed firewall technology that protects departmental intranets from unauthorized access by internal users.
- The *Gauntlet Net Extender* is the distributed firewall technology that provides secure communications over the Intranet and WANs to and from remote networks through the use of encryption. This product was introduced in the second quarter of 1996.
- The *Gauntlet PC Extender* provides secure communications over the Internet and other public networks to and from mobile PC users.
- RecoverKey™ is the world's first total solution for user-controlled management of strong encryption.

Commercial Consulting

TIS offers a range of consulting in information security policies and planning. The following commercial consulting services are offered:

- Technology research services
- Consultation on security issues associated with products and services, corporate information security policy development, architectural and diagnostic security analysis, and firewall configuration

- Training for corporate network and security administration personnel

Marketing and Sales

The company employs complementary domestic and international distribution channels, including direct sales, resellers, and telesales, to achieve market penetration of its network security products and services.

Clients

TIS's clients include Chrysler Corporation, Microsoft Corporation, NationsBank Corporation, Royal Dutch Petroleum Co., and Swiss Bank Corporation.

TIS's AR&E Division currently has major contracts with three agencies of the U.S. government: the National Security Agency, Air Force Rome Laboratories, and the Defense Advanced Research Projects Agency.

Alliances

TIS has established relationships with Atalla, IBM, Intel, Symantec, Oracle, Microsoft, Entrust Technology, Hewlett-Packard, McAfee, PC Guardian, Philips Crypto, Rainbow Technologies, Secured Communications Canada, Inc., Silicon Graphics, and BBN Planet.

In July 1997, TIS and Querisoft announced that Querisoft's SecureFile™ fully supports TIS's RecoverKey™ Cryptographic Service Provider (CSP), creating increased opportunities for using and managing strong encryption worldwide.

In July 1997, TIS announced a development partnership with Computer Associates International (CA). TIS's Gauntlet Internet Firewall 4.0 will be integrated into CA's enterprise management solution, Unicenter TNG.

Also in July 1997, TIS announced the licensing of its Key Recovery Technology to FTP Software, Inc. for incorporation into its suite of VIP Networking™ Products.

In April 1997, TIS and Price Waterhouse entered into an alliance agreement to assist each other in providing clients with network security solutions. TIS will provide Price Waterhouse with its firewall software and train Price Waterhouse security specialists on installation, operation, and day-to-day maintenance of the Gauntlet product.

In January 1997, TIS and IBM announced a patent and software license agreement that will accelerate the use of strong encryption. IBM acquires the right to license and distribute TIS's patented RecoverKey™ technology within the IBM SecureWay Key Management Framework, as well as in IBM products.

Competition

TIS's major firewall competitors include CheckPoint Corporation and Raptor Systems.

COMPANY
PROFILE**TRW INFORMATION SYSTEMS
& SERVICES**

500 City Parkway West
Orange, CA 92668
Phone: (714) 385-7000

CEO:	D. Van Skilling
Status:	Operating Group
Parent:	TRW Inc.
Total Employees:	5,986
Total Revenue:	\$770,000,000
Fiscal Year End:	12/31/91

Key Points

- During 1992, TRW offered all consumers a complimentary annual credit report, which remains unprecedented in the credit reporting industry, demonstrating the company's commitment to the consumer as an equal partner in the exchange of information between credit grantors and credit reporting agencies.
- In late 1991, as part of a corporate-wide restructuring plan to improve future financial performance, TRW Inc. announced a restructuring of its TRW Information Systems & Services unit to focus on its core businesses of consumer credit and marketing, business credit, image processing, and real estate information services.
- TRW management has also announced that certain nonstrategic and/or underperforming businesses are to be divested, including maintenance, reconditioning, and repair services for computers and computer-related equipment, real estate loan services, and receivables management services.
- During 1991, TRW combined its real estate information services with those of Elsevier to form TRW REDI Property Data, a joint venture providing expanded real estate data products and services for more than 318 counties in 34 U.S. states and the Virgin Islands.

**Company
Description**

TRW Information Systems & Services currently provides a range of network and processing services to commercial and government customers through the following units:

- TRW Credit Data Services, headquartered in Orange (CA) with 1,982 employees, provides consumer credit information services primarily to credit-granting organizations, businesses, and individual consumers.
- TRW Business Credit Services, headquartered in Orange (CA) with 236 employees, provides credit information on businesses to commercial credit grantors.
- TRW Target Marketing Services, headquartered in Richardson (TX) with 272 employees, provides target marketing data base information services to businesses involved in direct marketing.
- TRW Financial Systems, headquartered in Berkeley (CA) with 405 employees, provides systems engineering and integration services for image-based transaction processing applications to industries that process or handle large volumes of documents such as banking and finance, insurance, and government.
- TRW REDI Property Data, based in Riverside (CA) with 1,238 employees, is a joint venture with Elsevier (a diversified Dutch-based publisher) that provides real estate information services to title companies, appraisers, realtors, brokers, lenders, tax service companies, and government agencies.

TRW Information Systems & Services Group is an operating unit of TRW Inc., a \$7.9 billion company headquartered in Cleveland (OH). In addition to TRW Information Systems & Services, TRW provides high-technology products and services to the space and defense and automotive markets.

Financials

TRW Information Systems & Services reported 1991 revenue of \$770 million, compared to revenue of \$760 million for 1990. Operating losses of \$138 million for 1991 include restructuring charges of \$181 million. A three-year financial summary follows:

**TRW INFORMATION SYSTEMS & SERVICES
THREE-YEAR FINANCIAL SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR		
	1991	1990	1989
Revenue	\$770.0	\$760.0	\$705.0
• Percent increase from previous year	1%	8%	31%
Operating profit (loss)	\$(138.0)	\$49.0	\$60.0
• Percent increase (decrease) from previous year	(382%)	(18%)	161%

During 1991, higher revenues from appraisal and title underwriting activities and revenue resulting from the combination of TRW and Elsevier real estate information businesses were offset by a decline in consumer credit reporting and marketing businesses.

Excluding the restructuring charge, operating profit decreased to \$43 million from \$49 million in 1990. Lower volume in higher margin services and expenses associated with improvements in data base quality and consumer relations were partially offset by lower operating costs, the absence of the 1990 downsizing costs, and write-down of assets in the computer maintenance and refurbishing businesses and the information networks business.

Revenue for the nine months ending September 30, 1992 was \$576 million, compared to \$564 million for the same period in 1991. Operating income rose 50%, from \$33 million to \$50 million.

- Revenue for the three months ending September 30, 1992 were \$177 million, compared to \$194 million for the same period a year ago. Revenue declines reflect the absence of sales from businesses divested in July 1992.

Acquisitions/ Divestitures

As part of its restructuring, TRW management announced that certain nonstrategic and/or underperforming businesses are to be divested, including maintenance, reconditioning, and repair services for computers and computer-related equipment (TRW Customer Service Division); real estate loan services (TRW Real Estate Loan Services); and receivables management (TRW Receivables Management Services and Central Credit, Inc.).

- In July 1992, TRW completed the sale of its TRW Customer Service Division to ComputerLand. This division, based in Fairfield (NJ) with 1,200 employees, provided third-party maintenance services and support for microcomputers and worked with OEMs, resellers, and systems integrators to provide warranty and post-warranty service and support.
- Also in July 1992, TRW completed the sale of Receivables Management Services, Inc. (RMS) and Central Credit Inc. (CCI) to a Philadelphia-based investment group.
 - RMS and CCI became part of a new company called CRW Financial Inc.
 - RMS is a debt-collection business that assisted companies in managing their receivables. CCI provides information to the international gaming industry.

TRW Credit Data's consumer credit information services business was greatly expanded in March 1989 with the acquisition of Chilton Corporation for approximately \$330 million. Chilton provides consumer credit reporting, accounts receivable management, and other related services.

Competitors

In general, TRW Information Systems & Services competes with information providers in the credit and direct marketing industries, including credit bureaus, mailing list compilers, and information services companies.

In the consumer credit area, major competitors are TransUnion Credit Information Company and Equifax.

In the business credit services area, TRW competes with Dun & Bradstreet Credit Services.

In the real estate information services area, competitors include PRC Inc.

In the image-based systems area, competitors include PRC Inc.

Key Products and Services

INPUT estimates about 70% to 75% of TRW Information Systems & Services' 1991 revenue was derived from on-line data base and processing services related to consumer and business credit, target marketing, and real estate information services and 10% was derived from consulting, systems integration, and turnkey systems for image-based applications.

It is estimated that the remainder of revenue for 1991 was derived from businesses that have been discontinued or divested (hardware maintenance, real estate loans, and receivables management).

TRW Information Services (Credit Data):

TRW is one of the largest vendors of on-line consumer credit information with more than 170 million consumers on file. Credit histories are accessed by banks, savings and loans, oil companies, retailers, finance companies, insurance companies, and other credit grantors.

Each consumer file (or Credit Profile Report) includes information about retail credit and bank charge accounts, lines of credit, secured loans, and finance company accounts. Selected public record information limited to tax liens, judgments, and bankruptcies is also available. An optional profile summary provides 16 calculations of various items within the report, including trade lines, public records, real estate and revolving balances, past-due amounts, monthly payments, and available revolving credit.

TRW offers a series of decision support tools--such as generic, industry-specific, and custom risk models--to control risks and increase profits. Credit scoring systems are also available.

A portfolio analysis model provides creditors with scientific evaluation of the risk of consumer loan portfolios, the potential for cross-selling, and the financial potential of the marketplace.

TRW Business Credit Services:

TRW supplies credit information services on over 10 million small and large businesses throughout the U.S.

The TRW Business Profile Report provides an in-depth credit report with an executive summary that includes: days beyond terms, confidence score, historical payment guide, and significant public record data.

During 1991, TRW entered into a cross-marketing and licensing agreement with Verband der Vereine Creditreform E.V. of Germany to provide business credit services in North America and Europe.

TRW Target Marketing Services:

TRW provides information in support of business-to-consumer and business-to-business direct marketing to banks, security firms, retailers, cataloguers, auto makers, fund raisers, health care professionals, insurance companies, and other businesses involved in direct marketing campaigns.

Services available include:

- An on-line market analysis tool featuring a consumer mailing list of 164 million names in 84 million households selectable by financial and demographic data
- A commercial mailing list covering more than 10 million business locations nationwide, enhanced with current business credit and demographic information
- Financial promotion prescreening, target analysis, and computer support
- Statistical support and consulting for customized targeting
- Consulting services for creating, producing, and managing mail solicitations

TRW REDI Property Data:

This joint on-line venture, formed between TRW and Elsevier, provides a range of property, title, and tax information in a range of formats and media for more than 318 counties in 34 states and the Virgin Islands.

The hundreds of millions of records in TRW REDI's data base are processed and formatted at the company's data centers in California, New York, Colorado, Florida, Texas, and Washington. Information is then delivered to customers on-line, on microfiche, and in other media, including CD ROM, floppy diskette, magnetic tape, hard copy reports, and mailing labels.

- Property data and assessor's maps are available on microfiche.
- On-line property data is available for all 58 California counties and major markets in Washington, Arizona, and Illinois through DAMAR[®], a unit of TRW REDI.
- TRW REDI title information is available on-line or on microfiche in California, Arizona, Colorado, Indiana, Nevada, New Mexico, Texas, and Utah. Tax information is also available.
- California Real Property Files are available on CD ROM for 28 counties, with disks updated monthly.
- Real estate market reports are available in hard copy, or on diskette or magnetic tape.
- TRW REDI can also supply direct marketing and mailing lists from its data bases.
- In nine California counties, TRW REDI compiles and publishes photo-illustrated investment property reports.
- Through Sanborn Map Company (an operating unit of TRW REDI,) TRW provides surveying and mapping services on a contract basis and also provides enhancements to assessor's maps used in TRW REDI microfiche products.

Nationwide, TRW REDI provides more than 40,000 customers with millions of records each day.

TRW Financial Systems:

This unit provides image-based transaction processing systems and support services for industries that process or handle large volumes of documents such as banking and finance, insurance, and government.

TRW Financial Systems provides the following:

- Consulting services, including feasibility analysis, business plan development, request-for-proposal preparation, and vendor selection analysis
- Systems engineering to design and build customized image processing systems complete with supporting software
- Turnkey image systems that support remittance, check, new account applications, lockbox, and sales draft processing and insurance underwriting.

About 30% of TRW Financial Systems' current business is in the international marketplace. The company has contracts in the Netherlands and Norway.

TRW Financial Services has also designed and built American Express' Enhanced Country Club Billing System, MasterCard's MasterCom™ billing error resolution systems, and the giro processing system of Bankenes Betalings Sentral A/S (the Norwegian bank consortium).

Industry Markets

TRW Information Systems & Services' customers are primarily in the retail, banking, and financial services industries.

Geographic Markets

Virtually 100% of TRW Information Systems & Services revenue is derived from the U.S. The company derives a small amount of revenue from Europe.

Consumer credit services are offered nationwide through 70 offices and more than 55 independent credit bureaus. Consumer assistance is centralized in Dallas, which offers 1-800 telephone support nationwide, including 1-800 service for the hearing impaired.

TRW Business Credit Services is based in Orange (CA).

TRW Target Marketing Services is based in Richardson (TX).

TRW REDI has offices in Riverside (CA), Chicago (IL), Fairfax (VA), Ft. Lauderdale (FL), New York (NY), and Seattle (WA).

TRW Financial Systems is based in Berkeley (CA).

- DAMAR is based in Los Angeles (CA).
- Title information Services are available through Covina (CA).
- Sanborn Map Company is based in Pelham (NY).

COMPANY
PROFILE

INPUT LIBRARY

TSI INTERNATIONAL

45 Danbury Road
Wilton, CT 06897
Phone: (203) 761-8600
Fax: (203) 762-9677

President & CEO: Constance F. Galley
Status: Private Corporation
Total Employees: 120
Total Revenue: \$15,000,000*
Fiscal Year End: 12/31/92

*INPUT estimate

Key Points

- TSI is one of the leading EDI software companies. It has strong technology, a conscientious management, and what appears to be solid financial resources.
- TSI's Trading Partner PC and mainframe products have received consistently high praise from users. The PC product was the first EDI software to run in a Windows environment, which has helped small EDI users to integrate EDI messaging with PC software packages (especially spreadsheets and data bases).
- TSI was the first company to deliver a mainframe implementation of server-based EDI processing through its Trading Partner Express product for MVS. Trading Partner Express allows EDI functions such as translation and mapping to be driven from client applications residing on non-MVS platforms such as Stratus, UNIX, and AS/400.
- TSI, leveraging its knowledge of hub company EDI requirements, has launched a mass marketing approach, selling EDI Kits, which are preformatted PC software customized for specific large hub companies. These Kits could be a very effective way to reach the six million small businesses in the U.S.
- TSI is expanding the potential of EDI within the emerging electronic commerce market through its latest offering--Mercator. Mercator is a graphical, any-to-any mapping capability that could become the "middleware" needed to map structured data among various electronic formats.

Company Description

TSI International develops and markets software products for IBM mainframes and PCs with a special focus on solutions for the delivery of data to production systems. TSI addresses the market needs of traditional (manual) data entry as well as EDI.

Company History

Founded in 1967, TSI successfully developed and marketed systems software products in the IBM mainframe software market, culminating in the 1978 introduction of KEY/MASTER, which grew over the following years to become the world's leading data input software system.

In June 1989, Warburg, Pincus Ventures, the venture group of E. M. Warburg, Pincus & Co., Inc., chose TSI as a vehicle for an undisclosed, but purportedly substantial capital investment in the EDI market. Warburg joined existing investors Dun & Bradstreet and Vanguard Atlantic.

The capital infusion made its most dramatic impact in 1990 when TSI launched its own mainframe translation software product, Trading Partner.

During 1990, TSI also acquired the license and customer base to TranSettlement's TranSlate EDI software for IBM mainframes and acquired the PC-translator company Foretell Corporation (from JWP, Inc.).

Strategy

TSI's strategy is to provide EDI software and application integration solutions to large Fortune 2000 accounts and to the trading partners of these accounts.

- TSI's mainframe product provides the infrastructure for both the rapid expansion of EDI within a "hub" organization and the integration of EDI with existing applications.
- TSI's PC Kits allow hub organizations to expand their EDI programs externally by providing a low-cost, easy-to-implement solution that has been preconfigured for their partners.
- TSI's software has also been instrumental in the development of hub-delivered applications for major trading communities such as Wal-Mart's Retail Link and the newly created OCEAN package for ocean shipping.

TSI works closely with its clients and has developed its product technology in response to emerging market requirements. This is particularly evident with respect to TSI's Trading Partner product, which was created in response to the needs of experienced EDI users.

Financials

TSI's 1992 revenue reached \$15 million, a 21% increase over 1991 revenue of \$12.4 million. TSI's EDI revenues grew 36% in the same period.

Alliances

TSI has over 50 VAR relationships, an extensive network of international distributors, and co-marketing agreements with a number of companies involved in various aspects of electronic commerce. This includes relationships with Monarch Marking (bar-coding), Sigma Imaging (imaging and workflow), and BC TEL (network services).

TSI's EDI products operate with all major VANs, including Advantis, AT&T, BC TEL, BT North America, GEIS, Ordernet, and others.

TSI is a HEDIC-approved supplier of EDI software for the health care industry and has national agreements with both DEDIC and the Blue Cross and Blue Shield Association.

Competitors

TSI's primary competitors include GE Information Services, IBM, Sterling Software, and Supply Tech.

Key Products and Services

Approximately 60% of TSI's revenues come from its EDI products and 40% from KEY/MASTER and other sources.

EDI Products:

Trading Partner[®] is TSI's high-performance, mainframe-based EDI management software package for MVS and VSE environments.

• Components include:

- A translator for generating and validating EDI standard formats. The translator supports North American EDI implementations, the EDIFACT international standard, and user-tailored variations.

- An Applications GatewayTM for importing data to and exporting data from applications systems. The gateway contains the following features:
 - An on-line mapping facility that isolates production applications from changes in EDI formats
 - An exceptions management facility that provides a user-controlled environment for managing incoming data that passes standards validation but lacks information needed by the application (such as special pricing or sales commissions) or that fails other applications edits (such as validation of customer number)
 - Automatic data look-up facilities for substituting or appending data from tables or external files (e.g. converting incoming part numbers to standard part numbers)
 - Arithmetic capabilities, range checks, and other editing functions
 - EasyLogic, a tool for defining complex conditions and special edits from within Trading Partner without external programming
 - A data integration facility for incorporating bar-coded data, scanned data, and data in proprietary formats into the EDI data flow
 - An on-line window into incoming and outgoing data
 - A facility for keying of outbound transactions
- An administrative component for maintaining partner profiles and tailoring EDI exchanges to meet the special needs of each EDI partnership;
- An audit facility for tight monitoring and control of outgoing and incoming data.
- Trading Partner Real Time, introduced in 1992, provides support for real-time EDI through user control of processing schedules and priorities. Users can exert precise control of EDI activities by partner, transaction, application, and communications path.
- Trading Partner Express, also introduced in 1992, extends the capabilities of Trading Partner Real Time to provide concurrent EDI processing in separate MVS address spaces using a server-based

architecture. With Express, EDI functions such as translation and mapping can be invoked by user applications on non-MVS platforms, with a single user interface for EDI administration and control.

- Pricing for Trading Partner, Trading Partner Real Time, and Trading Partner Express is \$40,000 to \$200,000.

TranSlate[®] is an EDI translation software package that has been installed on a variety of platforms, including IBM mainframes (MVS and DOS/VSE), Unisys, Hewlett-Packard, Honeywell, Tandem, and DEC. TSI purchased the license to TranSlate and has upgraded the package but plans no major new releases. There are approximately 170 installations of TranSlate, including ones at major automotive, textile, manufacturing, banking, petroleum, grocery, retail, steel, and transportation companies.

Trading Partner[®] PC is EDI translation software designed for PCs. It runs in Microsoft's Windows environment and makes use of Windows' multitasking capabilities. It was the first EDI translation product designed for Windows and has over 4,000 installations. Trading Partner PC was developed by Foretell Corporation, which TSI acquired in 1990.

- Trading Partner PC supports ANSI X12, EDIFACT, and TRADACOMS EDI standard formats plus all industry implementations. It has communication interfaces for all major networks.
- Trading Partner PC is the first EDI product implemented in Windows 3.0. Trading Partner PC interfaces to flat files, but can also exchange data with Windows applications such as Excel spreadsheets using Windows' Dynamic Data Exchange (DDE).
- In conjunction with TSI's Kits program, Trading Partner PC has been reduced in price to \$495.

PC Kits: TSI sells preconfigured EDI packages known as Trading Partner Kits. Used in conjunction with Trading Partner PC, the Kits have all of the software and documentation required for trading with a specific hub.

- To date, TSI has produced a line of approximately 100 Kits to be used by spoke (supplier) companies to such hubs as Wal-Mart, Target, General Mills, Chrysler, and Allstate Insurance.
- TSI plans to offer another 100 buyer-specific Kits by the end of 1993.

- Kits are priced from \$249 to \$395 per Kit.
- TSI also sells a full complement of EDI standards as one form of Kit. Full EDI standard collections for ANSI, X12, and EDIFACT sell for \$295 each.
- TSI has contracted with the ISA, a consortium of the world's largest ocean shippers, to develop a custom version of the Kit called OCEAN. OCEAN will be used by ISA customers to conduct business electronically including booking shipments, processing invoices, and tracking shipment status.

Mercator™ is a general purpose data mapping product capable of transforming data arranged in any format into any other format (including but not limited to standardized file formats). In an EDI context, Mercator performs the important function of mapping EDI data to and from applications.

- Mercator runs under Windows, is based on object-level versus field mapping concepts, and has "any-to-any" mapping capabilities.
- The product features graphical, drag-and-drop operation and spreadsheet-like rules that eliminate the need for user programming.
- Mercator is written using client/server architecture. Maps and data structures are defined in client mode under Windows. The actual conversion of data (map execution) takes place in server mode. With the initial release of Mercator, map execution is under Windows. In subsequent releases, map execution will also occur in DOS, UNIX, and MVS environments.

Other Products:

KEY/MASTER^R provides facilities for data input to production applications and data bases from on-line 3270 terminals, off-line PCs and LANs, and nonkeyed sources such as bar codes, scanners, OCR, imaging, and ATMs.

- KEY/MASTER runs on IBM mainframes under all current versions of VSE, MVS, and VM/CMS.
- There are approximately 2,200 mainframe installations of KEY/MASTER throughout 28 countries in the world.

PC KEY/MASTER is a menu-driven data input system designed to suit the requirements of remote, casual users as well as decentralized, high-volume, data input users. Written in C, PC KEY/MASTER runs under PC-DOS on the IBM XT, AT, PS2, or any compatible PC and on any

PC-DOS-compatible networking software, such as Novell's Netware and IBM's Token Ring.

KEY/MASTER for Windows, introduced this past year, is a Windows-based forms design facility.

Industry Markets

TSI markets to large Fortune 2000 companies across all industry categories including manufacturing, distribution, transportation, health care, grocery, retail, telephone, and finance, and these companies' trading partners.

TSI's ability to handle the complex EDI transaction requirements in the health care and telephone industries gives it particular strength in these markets.

Clients

TSI has over 5,000 clients worldwide for its software products.

Geographic Markets

Approximately 80% of TSI's revenues are derived from U.S. sales and 20% from international sources.

TSI markets and supports its software worldwide through its U.S. headquarters, U.S.-based sales offices, a direct sales office servicing the U.K., and a network of regional offices, agents, and distributors in 26 countries.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

September 1996

TuneUp.com, Inc.

Chairman: Patrick Dane
CEO: Michael Walter
President & COO: Emerick Woods
795 San Antonio Road
Palo Alto, CA 94303
Phone: (415) 856-9956
Fax: (415) 856-8778
Internet: <http://www.tuneup.com>



Status: Private
Employees: 27
Fiscal Year End: 12/31/95

Company Description

TuneUp.com claims to be the first one-stop, on-line PC service center on the World Wide Web. Founded in 1995 by Pat Dane and Michael Walter, the company delivers a range of PC services to subscribers via the Internet.

- To meet the aftermarket demand for ease of installation, use, and maintenance of PCs, TuneUp.com offers a combination of new tools new component-sized applications, and customer service interfaces, referred to as Serviceware™.

- Using that approach, which it pioneered, TuneUp.com provides subscribers with on-line delivery of essential services that it believes are smaller, faster, more affordable, and less hassle-prone than traditional software products.

Organization and Structure

TuneUp.com is headquartered in Palo Alto (CA).

The company's key executives are listed on the following page.

TuneUp.com Key Executives

Name	Title
Patrick Dane	Chairman
Michael Walter	CEO
Emerick Woods	President and COO
Jeffrey Mason	VP, Engineering and Technology
Lowell Forte	VP, Operations

Company Strategy

TuneUp.com believes that utility software is currently viewed by most consumers as too expensive, in terms of dollars paid and time required to install it and to learn how to use it to its fullest potential.

- Consequently, TuneUp.com estimates that less than 10% of all users have invested in utility software. Fewer still back up their important files on a regular basis or use the documentation that comes with new software.
- If a user gets stuck, the current method of choice for obtaining an answer is a telephone call—an expensive proposition for manufacturers and, ultimately, end users.

Beginning in September, 1996, the service center at www.tuneup.com will provide subscribers with on-line services at an initial rate of only \$39.95 per month—less than \$500 per year.

- Services will include delivery of serviceware that will perform virus protection and file virus repair; disk repair and optimization; file storage and automatic data file back-up; automatic notification via E-mail when new software, computer, and/or driver updates from participating vendors become available; on-line customer service and technical support; a virtual magazine rack

offering free trial issues and special discount subscriptions to Ziff-Davis publications about computers and the Internet; and superior content provided by recognized authors and commentators.

- In the near future, training and hardware repair via a worldwide network of field service associates will be available as well as serviceware that will handle application removal, free trials of software, version updates, bug fixes, and a parts and accessories department.

Financials

TuneUp.com is a privately held company financed in part by the Mayfield Fund, a leading Silicon Valley venture capital firm.

Employees

TuneUp.com currently has 27 employees.

Key Products and Services*PCTuneUp™*

For Windows 95 users, this service ensures that the computer is running smoothly by performing anti-virus scan and repair of file viruses and disk optimization using technology from Norton AntiVirus and Norton Utilities. Subscribers log onto the TuneUp.com Web site to download the PCTuneUp serviceware™, then run it off line, from the security of their own hard drive. Subscribers visit the Web site monthly to download current virus solution updates.

TuneUpDate™

With TuneUpDate, TuneUp.com subscribers complete a user profile at the Web site, and are automatically notified via E-mail when new software, computer, and/or driver updates become available for their systems from participating vendors.

DataGarage™

DataGarage is an on-line data backup service with high security that ensures safe-keeping for all files. The service is available in different sizes—5MB, 10MB, and 30 MB for \$2.95/month, \$4.95/month, and \$9.95/month, respectively. Subscribers can choose the size of their "garage" while on-line, order services, or choose automatic E-mail notification service. DataGarage is a premium service that TuneUp.com subscribers can add to their basic subscription. Availability is scheduled for October 1, 1996.

MagazineRack™

TuneUp.com offers free trial issues and special discount subscriptions to Ziff-Davis publications, leading magazines about computers, and the Internet.

TuneUpTalk™

This service allows TuneUp.com subscribers to participate in live, on-line question-and-answer sessions with TuneUp.com employees, industry experts, and other subscribers.

StayTuned with Pat & Mike™

This is a biweekly column on the TuneUp.com Web site about PC-related topics by the creators of TuneUp.com—Pat Dane and Mike Walter.

Customer Service

On-line customer service with access to TuneUp.com's Customer Service department assists customers with their subscriptions or other services. All requests are submitted by the subscriber using an on-line form and are tagged by different levels of urgency.

Technical Support

The company offers on-line technical support with access to TuneUp.com's Technical Support department to assist subscribers with

computer problems. All requests are submitted by the subscriber using an on-line form and are tagged by different levels of urgency.

Searchable FAQs (Frequently Asked Questions)

This service allow subscribers to search through TuneUp.com's database of solutions to frequently asked questions.

Suggestion Box

Suggestion Box supplies E-mail feedback to TuneUp.com to let the company know what subscribers think about the services currently available and about services they would like to see offered.

Partners

TuneUp.com has developed a partnership-based business model whereby the company has made exclusive arrangements with leaders in various segments of the PC software industry to key components of its service.

- In order to provide customers with the most current repair and maintenance software, TuneUp.com has developed relationships with leading utilities software developers. Symantec/Norton Utilities is continually developing key computer care programs, including anti-virus, defragmentation, optimization, and analysis software.
- In addition, Hewlett-Packard and other participating computer software and hardware manufacturers will be making their new software, computer, and/or driver updates, patches, and fixes available from the TuneUp.com Web site via the TuneUpDate™ serviceware. Based on subscriber profiles, TuneUpDate will automatically notify subscribers via E-mail

when new information becomes available that matches their configurations.

- In addition to the Serviceware solutions described above, Tuneup.com plans to deliver content from recognized authors and commentators. Jim Aspinwall (co-author of *Troubleshooting your PC*) and nationally syndicated columnist and radio personality Kim Komando will be featured on the site and available to answer users' questions. A chat service, TuneUpTalk™—where users can compare notes and help each other—will also be featured.
- TuneUp.com is also working with various companies in order to expand its distribution model; these range from Internet Service Providers to telephone companies.

To date, TuneUp.com has partnered with a range of companies in order to offer expanded services and technologies, including Symantec Corporation, Connected Corporation, Ziff-Davis Publishing Company, Hewlett-Packard, First Floor Software, and TestDrive.

Competition

TuneUp.com has no direct competition currently in this fledgling market. However, the company does compete with conventional, off-the-shelf software products available at retail and some that are available via the Internet.

INPUT Assessment

TuneUp.com's strengths include:

- First-to-market advantage
- Partnerships and support of major industry players (Symantec, HP)
- Company management experience in the computer industry

Future challenges include:

- Promoting company services to potential users
- Improvement and expansion of the services offered

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

May 1997

Unisys Corporation - Outsourcing

Chairman & CEO: James A. Unruh
P.O. Box 500
Blue Bell, PA 19424-0001
Phone: (215) 986-5777
Fax: (215) 986-6850
Internet: <http://www.unisys.com>

Status:	Public
Total WW Employees:	32,900 (12/96)
Total WW Revenue:	\$6,370,500,000
Total Outsourcing Revenue:	\$300,000,000*
Fiscal Year End:	12/31/96

The following profile outlines the products, services, and support offered by Unisys Corporation to its clients for outsourcing services and offers a representative sample of recent outsourcing contracts.

* INPUT estimate

Company Description

Unisys is an information management company providing outsourcing, hardware, professional services, software development, systems integration, systems and application software, and network development services to clients.

Unisys has more than 30,000 employees and more than 50,000 clients in 100 countries worldwide. The company has 47 major U.S.

facilities and 40 facilities outside of the U.S. These major facilities include offices, laboratories, warehouses, manufacturing facilities, and distribution/sales centers.

Organization and Structure

Unisys's North American and European businesses are organized into the following three business units, each with its own sales and marketing organization:

- Computer Systems Group (CSG), accounting for approximately 38% of 1996 revenue
- Information Services Group (ISG), representing approximately 31% of revenue
- Global Customer Services Group (GCS), accounting for approximately 31% of revenue

Outsourcing services are provided primarily by the Information Services Group (ISG), which also provides systems and network integration, consulting, enterprise management, and vertical solutions services, as well as research and strategic services, information planning, and process redesign.

Unisys's ISG is comprised of:

- Outsourcing
- Six strategic market sector business units (public sector, commercial, financial, transportation, communications, and health information management)
- Application technology-based horizontal practices

Desktop services and network outsourcing are provided by Unisys's Global Customer Services Group. GCS provides a full range of departmental server and desktop services, network integration, traditional multivendor maintenance and support services, and printers and supplies.

The CSG provides development and manufacturing of enterprise systems, servers, workstations, and personal computers for open, client/server networks.

Unisys's key executives are summarized in Exhibit 1.

Exhibit 1

Unisys Key Executives

Name	Title
Chairman & CEO	James A. Unruh
Pres., Information Services Group	Lawrence C. Russell
Pres., Computer Systems Group	George R. Gazerwitz
Pres., Global Customer Services Group	Gerald A. Gagliardi

In addition to the above business units, Unisys's Federal Systems Division (FSD) provides commercial information services and technology to the federal government. The Unisys Pacific Asia and Latin American organizations serve as distribution outlets and value-added resellers for the ISG, CSG, and GCS.

Mission

Unisys Outsourcing's mission is to develop and deliver quality outsourcing solutions, recommendations and services that are based on its clients' requirements, improve the value and effectiveness of its operations, and enhance the services its clients provide to their customers.

Unisys Outsourcing strives to become the single contact for and long-term provider of medium and large companies' IT needs by providing world-class, full-service outsourcing. Unisys delivers customized, flexible services across multiple technology platforms, placing a premium on personalized attention and client orientation.

Strategy

Unisys's goal is to become a recognized leader in helping clients apply technology to improve customer service and enhance their competitiveness and responsiveness.

In its Information Services and Global Customer Services business groups, Unisys's "top down, bottom up" information services strategy is to continue to expand its market position and capabilities. It is implementing this strategy in a variety of ways.

Unisys is changing its technology mix from primarily Unisys to include other platforms, such as IBM/MVSS, Unix, and HP. Currently, approximately 40% of outsourcing revenue is derived from non-Unisys environments. The company is focusing on selected markets, such as managed care, communications, financial, and commercial markets.

Unisys targets Fortune 300-800 companies, either Unisys or non-Unisys hardware clients, and companies in industries that are undergoing change. The company is also making efforts to broaden its service offerings to include applications maintenance, enterprise network services, consulting, and Internet/Intranet services. It will continue to develop business process outsourcing business by alliance or acquisition.

Company Financial Information

Unisys's 1996 worldwide revenue was \$6.37 billion, compared to fiscal 1995 revenue of \$6.34 billion. INPUT estimates that Unisys's

Exhibit 2

outsourcing revenue was approximately \$300 million in 1996.

Market Financials

Unisys targets five core vertical market segments:

- Financial services
- Public sector/government (including health information management)
- Communications
- Transportation
- Commercial (manufacturing, retail chains, and publishing)

Geographic Markets

The company provides services globally, with international revenues representing a steadily increasing portion of total revenues. In 1996, 63% of total revenue was derived from non-U.S. markets, up from 61% in 1995.

Approximately 38% of the company's 1996 revenue was generated from North American markets (primarily the U.S.), 32% from Europe and Africa, 19% from the Pacific/Asia markets, and 11% from Latin America.

Exhibit 2 indicates the geographic sources of revenue for 1996, as provided by Unisys.

Two-Year Geographic Source of Revenue Summary

Geographic Market	Fiscal Year			
	1996		1995	
	Revenue (\$M)	Percent of Total	Revenue (\$M)	Percent of Total
United States	\$2,350.0	37%	\$2,405.5	38%
Europe and Africa	2,063.5	32%	2,090.3	33%
Americas/Pacific	1,957.0	31%	1,846.5	29%
TOTAL	\$6,370.5	100%	\$6,342.3	100%

Source: Unisys

Key Products and Services

Unisys Information Services Group

Unisys Information Services Group (ISG) provides systems integration, management consulting, and outsourcing services, as well as in-depth market sector expertise to help clients use information management to enhance their competitiveness and better serve their customers.

ISG sales and delivery are focused on six market areas:

- Public sector (justice, social services/admin., tax and revenue, postal)
- Commercial (consumer goods, publishing, construction, education)
- Financial (banking, insurance, payment systems, central banks)
- Transportation (airlines, airports, freight)
- Communications (telephone, cable)
- Outsourcing (covering all vertical markets)

These are enhanced by application technology-based horizontal practices, which include:

- NT
- Year 2000
- Decision support
- Customerize
- Payment systems
- Document imaging

Unisys Outsourcing, a division of ISG, is headquartered in Reston (VA). It delivers a full range of multivendor outsourcing services to more than 65 clients in North America, 120 worldwide.

The division is organized in a vertical market orientation, with principals knowledgeable about the issues and needs of specific industries. Outsourcing services include:

- **Program Management Services**—assuming responsibility for personnel issues; delivering and reporting on service levels; implementing the Unisys Total Quality Process
- **Systems Management Support**—managing data center operations; maintaining systems and software; supplying voice and data network operations, support, and administration
- **Application Management**—engineering software; developing, maintaining, and enhancing software applications; providing systems analysis; planning systems
- **End-User Computing Support**—supplying PC/LAN support; providing 24-hour hotline/help desk support; offering software application training and documentation
- **Network Operations**—managing, maintaining, and supporting software and operations for local, wide-area, and multi-vendor networks
- **Transitional Outsourcing Support**—managing legacy systems during transition from a traditional mainframe environment to a distributed environment; providing systems development and migration support; implementing, stabilizing, and managing the new environment
- **Business Process Engineering**—full program management and life-cycle support for technology-based business processes; performing labor-intensive administrative tasks associated with non-core processes

- **Operation Solutions Service**—consulting services focused upon improving the performance of client operations, including data center consolidation analysis and implementation, Year 2000 consulting and management, capacity planning, and disaster recovery planning and implementation

Computer Systems Group

The Computer Systems Group (CSG) provides development and manufacturing of enterprise systems, servers, workstations, and personal computers for open, client/server networks.

Global Customer Services Group

The Global Customer Services Group provides a full range of departmental server and desktop services, network integration, traditional multivendor maintenance and support services, and printers and supplies.

This business unit includes two segments:

- **Network Enable**—consulting, design, implementation, integration, network management, ongoing support, project management, internetworking, security, voice/data integration, Web site integration, and multivendor network maintenance
- **Desktop Services**—consulting, design, asset management, operations management, provisioning, configuration, installation, integration, ongoing support, project management, call center operation, network management, and multivendor hardware maintenance

Examples of Outsourcing Contracts

A sampling of recent outsourcing contracts is provided below.

United HealthCare Corporation—United HealthCare Corp. had been expanding rapidly and needed to consolidate some of its computer operations into a smaller number of operating platforms to achieve efficiencies and cost control. It also needed to be able to focus on its core business and to provide quality information processing solutions to its customers.

In July 1996, United HealthCare awarded Unisys a 9.5-year, \$200 million contract to consolidate and manage its systems operations. Unisys is relocating a significant portion of United HealthCare's operations to Unisys Eagan Service Center in Eagan (MN). Systems being transferred include IBM, HP, UNIX, and Unisys A-Series enterprise server platforms. Approximately 60 United HealthCare employees were transferred to UNISYS Outsourcing.

Anthem Insurance Companies, Inc. —

Anthem, an Indianapolis (IN)-based insurance and health care management company, needed to redeploy critical resources to strategic projects and customer service issues and to place greater focus on its core business of managed care. It also needed to reduce expenses and gain access to technology expertise as it prepared to undergo a period of change and growth.

In January 1996, Anthem (formerly The Associated Group) selected Unisys Outsourcing to provide data center operations functions and support for its facilities in Indianapolis (IN), Cincinnati (OH), and Louisville (KY). Under the terms of the five-year, \$125.0 million engagement, Unisys Outsourcing provides software support for the MVS/ESA operating systems, technical support, data center operations, capacity planning, hardware and software acquisition,

performance tuning, security, business continuation, and technology planning.

Unisys acquired 102 Anthem employees and information technology assets, including EMB mainframe and midrange platforms and UNIX systems. The renewal arrangement can be extended to cover ten years and a total of \$250.0 million in revenues.

BASF Corporation—Facing a transition to client/server technology, BASF needed to reallocate critical resources to manage the migration of its strategic applications. BASF awarded Unisys a \$4.4 million, four-year contract to provide remote systems support outsourcing services from its Eagan Service Center in Eagan (MN). Unisys is providing computer support, data network management, systems maintenance, and support services. These support services include help desk services, contingency planning, and technical systems support operations.

For a listing of representative recent contracts, see Exhibit 3.

Competition

Unisys Outsourcing competitors include:

Andersen Consulting, CAP GEMINI, Computer Sciences Corp., EDS, IBM Global Services, MCI Systemhouse, SCT, SEMA, HP, and Digital.

Key Differentiators

Unisys outsourcing differentiators include:

- Worldwide presence
- Vertical market expertise in managed health care, manufacturing, and retail industries

- Broad and varied experience of management in IT industry
- Customer-oriented delivery methodology
- Expertise in multivendor platform integration
- Proven methodologies and “best practices” for key delivery areas, including transition management, communication, and service-level management
- Full range of outsourcing services
- Flexible procurement vehicles

Unisys Outsourcing Pricing

Each of Unisys’s outsourcing contracts is custom priced, depending on the specific needs of the customer. A variety of pricing models are currently used, including fixed-price-per-unit pricing and gain-sharing pricing.

Alliances

Unisys Outsourcing partners with best-of-breed providers on a case-by-case basis to create solutions that meet the requirements of their clients. Relationships are developed in order to team easily so as to assemble and implement the appropriate solutions.

Key alliances for the Information Services Group include those with Hewlett-Packard, Kaiser Associates, Lotus, Mercer Management Consulting, Microsoft, Oracle, PeopleSoft, Sun Microsystems, Tandem, and Siebel Systems.

Exhibit 3

Representative Recent Unisys Outsourcing Contracts

Unisys Client	Industry	Award (\$M)	Outsourcing Type	Duration (Years)
Department of Treasury	Federal	520.0	Application Operations	12
Social Security Administration	Federal	280.0	Desktop Services	7
U.S. Department of Justice	Federal	100.0	Desktop Services	5
U.S. State Dept. - Bureau of Admin.	Federal	5.0	Application Operations	5
British Telecommunications	Telecommunications	116.0	Business Operations	3
Cathay Pacific Airways	Transportation	26.0	Application Operations	5
Volkswagen Argentina	Discrete Manufacturing	1.5	Application Operations	2
Anthem	Health Care	125.0	Application Operations	5
Molina Medical Centers	Health Care	NA	Application Operations	NA
United HealthCare	Health Care	200.0	Application Operations	9.5
The Associated Group	Insurance	100.0	Application Operations	5
Redbook Florist Services	Retail	10.6	Desktop Services	3
Florida Motor Vehicles	State/Local	11.2	Business Operations	5
Kentucky Medicaid	State/Local	57.0	Business Operations	NA
Oklahoma Health Care Authority	State/Local	35.0	Business Operations	5

Source: INPUT's Outsourcing Contracts Database

INPUT Assessment

Unisys's late 1995 reorganization and new strategic focus will help it achieve growth. Its strategy to include non-Unisys hardware in its outsourcing services certainly will broaden its market. In addition, the focus on growth vertical markets such as health care and telecommunications should contribute to the company's success. Unisys's efforts to improve its image as a services provider and to offset its traditional association with

Unisys hardware should broaden its range of outsourcing opportunities.

To achieve strong growth, Unisys would do well to emphasize business development in growth outsourcing markets, such as business operations, desktop services, and network outsourcing, as well as applications management. Success in these markets may require acquisitions or the creation of alliances as needed for specific deals.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1995

U.S. Intelco Networks, Inc.

President:
CEO:
P.O. Box 2909
Olympia, WA 98507
Phone:
Fax:

A.H. Eaton
Robert D. Cook

(360) 493-6000
(360) 493-6253

INPUT LIBRARY

Status:	Private
Parent:	U.S. Intelco Holdings, Inc.
Employees:	155
Revenue:	\$17,000,000
Fiscal Year End:	12/31/94

Key Points

- During 1994, U.S. Intelco Networks became a wholly owned subsidiary of a newly formed parent company—U.S. Intelco Holdings, Inc.
- U.S. Intelco Holdings has a second wholly-owned subsidiary—U.S. Intelco Wireless Communications, Inc.—which is now assisting customers in entering the Personal Communications Services (PCS) marketplace.

- U.S. Intelco Networks also focuses on enhancing current database and message aggregation products to offer new capabilities to customers. These capabilities include Calling Name Delivery—one of the industry's first Domestic Calling Card restrictions, and a new Message Processing System.

Company Description

U.S. Intelco Networks provides billing, database and intelligent network services to more than 1,000 telecommunications entities throughout the continental U.S. These entities include interexchange carriers (IXCs), operator service providers (OSPs), competitive local exchange carriers and independent telecommunications companies.

Organization and Structure

U.S. Intelco Holdings, Inc. is the parent company with two subsidiaries:

- U.S. Intelco Networks, Inc.
- U.S. Intelco Wireless Communications, Inc.

Company Strategy

The company's strategy is to continue to provide high-quality services and products to the telecommunications marketplace through service leadership, an expanded service and product base, entry into emerging markets (e.g., wireless) and long-term customer relations.

Financials

U.S. Intelco Network's 1994 revenue was approximately \$17.0 million, a 10% increase over 1993 revenue of \$15.4 million.

Market Financials

Virtually all of U.S. Intelco's revenue is currently derived from the telecommunications industry. The company targets its products and services to independent telecommunications companies, IXCs, OSPs, competitive local exchange carriers and most recently, Regional Bell Operating Companies.

Geographic Markets

One hundred percent of U.S. Intelco's current revenue is derived from the U.S.

Employees

As of December 31 1994, U.S. Intelco had approximately 155 employees.

Key Products and Services

U.S. Intelco provides state-of-the-art database services, including an Independent Line Information Database (LIDB) in which customers store subscriber records for calling

card validation. LIDB-based applications include calling card services, fraud detection and control and Calling Name Delivery services.

Other services include:

- Message aggregation and toll clearinghouse services for independents, IXCs, competitive access providers and OSPs via a newly-upgraded Message Processing System. Also provides a Revenue Administration system for independent telephone companies and AT&T.
- Patented SS7 usage measurement/billing applications for SS7 network providers.
- Voice mail systems are supplied within Washington State to various government agencies.

Through U.S. Intelco Wireless, the company provides PCS services to independents and other designated entities. These services include market reports, financial models, partnership structures, bidding strategies, financial arrangements, complete PCS system buildout services, branding and marketing and PCS support products.

U.S. Intelco technology includes:

- IBM 4381
- Tandem VLX
- DEC VAX 4000-200
- HP 9000-867
- HP 9000-800/G50

Clients

The company has clients in 47 states.

Marketing and Sales

The company pursues sales through direct marketing, via regionally-based account

managers. The company has marketing representatives based across the U.S.

INPUT Assessment

U.S. Intelco's strengths include its expertise in database and message aggregation technologies, in which it has built a strong reputation through more than a decade of service to independents, IXC's and OSP's.

The company's main challenge over the coming year is to successfully break into markets it has not previously targeted, including Regional Bell Operating Companies, cable and entertainment companies, and other competitive providers entering the modern telecommunications marketplace.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

November 1996

USWeb Corporation

Chairman & CEO: Joe Firmage
3000 Lakeside Drive
Santa Clara, CA 95054
Phone: (408) 987-3200
Fax: (408) 987-3230
Internet: <http://www.usweb.com>



Status:	Private
Employees:	63
Fiscal Year End:	3/31/96

Key Points

- USWeb Corporation, launched in March 1996, is a global professional services firm specializing in Internet Web services.
- In November 1996, Utopia, a leading Internet professional services firm, joined the USWeb network of affiliates, increasing the network by 25%.
- In October 1996, USWeb announced that it had doubled its Affiliate network from 15 to 30 locations within a two-month period.
- In September 1996, Sun Microsystems and USWeb signed a strategic reseller agreement under which all USWeb affiliates are authorized resellers of Sun's Netra Internet servers.
- In July 1996, Compaq Computer Corporation and USWeb entered into an agreement authorizing USWeb affiliates to resell Compaq products.
- In May 1996, USWeb and BBN Corporation announced an agreement under which BBN will provide high-availability Web hosting services to USWeb customers.

Company Description

USWeb Corporation was founded in December 1995 and funded in February 1996 with approximately \$17 million in capital backing from SOFTBANK and two smaller investors.

USWeb is the first global professional services firm to provide a single source for Internet and intranet services that enable businesses to reduce the complexity and cost associated with building a presence on the Web.

To accomplish this mission, USWeb established the USWeb Network of Affiliates to provide Web development expertise and other Internet consulting services to businesses. The USWeb Network is a worldwide affiliation of franchised affiliates known as USWeb offices, each providing Web-related services. It also provides Internet access, hardware, and software products from third parties.

Organization and Structure

USWeb's key executives are summarized below.

USWeb Corporation Key Executives

Name	Title
Joe Firmage	Chairman & CEO
Toby Corey	EVP, Marketing
Sheldon Laube	EVP and CTO
Ken Campbell	EVP, Affiliate Support
James Heffernan	CFO
Thomas Cary	VP, Operations

USWeb corporate headquarters are located in Santa Clara (CA).

The corporate headquarters are the center of technology research and marketing for affiliates located across the country. USWeb

currently has USWeb offices in 22 states, including facilities in Albuquerque (NM); Atlanta (GA); Boise (ID); Boston (MA); Carson, Los Angeles, Oakland, Palo Alto, San Diego, San Francisco, San Jose, Santa Monica, and Sunnyvale (CA); Chicago and Wheaton (IL); Clearwater, Miami, and Orlando (FL); Dallas, Ft. Worth, and Houston (TX); Denver (CO); Des Moines (IA); Hudson (OH); Las Vegas (NV); Minneapolis (MN); New Berlin (WI); New York and Westbury (NY); Omaha (NE); Philadelphia (PA); Phoenix (AZ); Portland (OR); Tulsa (OK); Seattle (WA); and Washington, D.C.

Company Strategy

USWeb's strategy is to establish a worldwide network of affiliates that offer professional services from which businesses of all sizes can obtain consistent Internet and intranet needs analysis, Web consulting, development, access, hosting, site marketing, and educational services.

USWeb's mission is to become the world's largest provider of professional services for the Internet and intranet Web sites.

Financials

USWeb was founded in December 1995, and has spent the majority of its efforts since its inception signing strategic agreements and establishing its affiliate network.

Consequently, INPUT believes that USWeb has not yet generated any significant revenue, aside from licensing fees received from its initial affiliates.

Market Financials

USWeb is targeting companies that need Web site development, hosting, or maintenance, or any combination of these, with typical annual budgets between \$10,000 and \$2 million for establishing and sustaining a Web presence.

Geographic Markets

Currently, 100% of USWeb's revenue comes from the U.S. market. USWeb offices represent 56% coverage within 170 Standard Metropolitan Statistical Areas (SMSAs) in the U.S.

USWeb hopes to have between 40 and 50 affiliates by the end of 1996.

Employees

USWeb currently has 63 employees.

The company expects to have 67 employees by the end of 1996.

Key Products and Services

USWeb offers a variety of Web-related services that can be used by the customer as a set or individually. These services include the following:

- *Analysis* of a company's current business situation and recommendation of Web solutions, tailored to the client's budget and objectives
- *Web development* of Internet and intranet Web sites for a client's business. Site development service availability includes information sites, store fronts, electronic commerce, and high-end database sites.
- *USWeb's hosting service* provides carrier-grade hosting and monitoring and back-up by USWeb to provide security and reliability.
- *Web site management and marketing*, including development, updating, testing, and tracking
- *Education and training* to help clients learn more about the Internet and intranets, including Web development, site

management, on-line marketing, intra-business communication, and security

- *Internet access, hardware, and software products* offered by USWeb through partnerships with telecommunications and technology vendors. Each USWeb office functions as a single point of contact for on-line Internet access and e-mail services, hardware, and software products.

Clients

A sampling of USWeb clients include Catalina Marketing Corp., Marcus & Millichap, Ravenswood Winery, and Tech Data Corporation.

Marketing and Sales

In October 1996, USWeb announced a national advertising campaign to attract companies needing Web services.

Alliances

In September 1996, USWeb signed a strategic reseller agreement with Sun Microsystems, naming Sun's Netra Internet server as the preferred UNIX platform supported by USWeb and making all USWeb affiliates authorized resellers of the Sun servers.

USWeb and Shiva have an agreement that calls for USWeb to resell several Shiva products, including Shiva's Lanrover remote access servers, Integrator ISDN routers, AccessPort client ISDN routers, and the WebRover stack for leased-line Internet connectivity.

In July 1996, USWeb and Compaq Computer Corporation signed a strategic agreement authorizing USWeb affiliates to resell Compaq products, under which Compaq CPUs and servers will be the preferred Windows NT platform supported by USWeb.

BBN Corporation and USWeb have an agreement under which BBN, through its BBN Planet commercial services, will provide Web hosting services to USWeb customers. BBN also provides Web site performance monitoring and reporting capabilities to ensure consistent performance levels in a shared Web hosting environment.

Competition

USWeb has no direct competition in establishing its network of affiliates that provide a consistent range of standard services.

Competition in each of the company's service markets is provided by individual design, advertising, access, or development firms.

INPUT Assessment

USWeb's strengths include the following:

- Increasing demand for Web development
- Breadth and consistency of services provided by USWeb Network affiliates
- Partnerships with major access, hardware, and software providers
- Industry experience of management

Future challenges include:

- Continued development of USWeb Network
- Creating demand and acceptance of franchised Web development
- Managing growth
- Establishing a consistent source of revenue

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1996

U S WEST, Inc.

**Chairman
& CEO:** Richard D. McCormick
7800 East Orchard Road
Englewood, CO 80111
Phone: (303) 793-6500
Fax: (303) 793-6245
Internet: <http://www.uswest.com>

Status:	Public
Employees:	61,000 (12/96)
Revenue:	\$11,746,000,000
Fiscal Year End:	12/31/95

Key Points

- U S WEST, Inc. is a diversified global communications firm that owns companies involved in domestic and international telecommunications, cable and wireless networks, directory publishing, and interactive multimedia services.
- In November 1996, U S WEST finalized the merger of its U S WEST Media Group with Continental Cablevision, the nation's third largest broadband telecommunications company.

- In October 1995, U S WEST shareholders approved a plan to create two classes of common stock to reflect separately the performance of its communications and multimedia businesses.

Company Description

U S WEST is a diversified global telecommunications company that conducts its operations through two groups:

- The U S WEST Communications Group primarily provides telecommunications services to more than 25 million business and residential customers in 14 western and midwestern states: Arizona, Colorado, Idaho, Iowa, Minnesota, Montana, Nebraska, New Mexico, North Dakota,

Oregon, South Dakota, Utah, Washington, and Wyoming.

- The U S WEST Media Group operates domestic and international cable television and wireless telecommunications networks, publishes directories, and develops and markets interactive multimedia services.

Effective November 1, 1995, each share of U S WEST, Inc. common stock was converted into one share each of U S WEST Communications Group common stock and U S WEST Media Group common stock.

Organization and Structure

U S WEST's operations are conducted by the U S WEST Communications Group and the U S WEST Media Group.

- The current organization of these two groups is shown in Exhibits A and B.
- Operations of each unit are summarized under Key Products and Services.

Key executives of the U S WEST Communications Group are shown below:

Communications Group Key Executives

Name	Title
Sol Trujillo	President & CEO
Tom Bystrzycki	EVP, Operations and Technologies
Bob Hawk	President, Carrier Division
Barbara Japha	VP, Treasurer, and CFO
Jim Stever	EVP, Public Policy
John Arrington	VP Human Resources

Source: U S WEST

Key executives of the U S WEST Media Group are shown below:

Media Group Key Executives

Name	Title
Charles M. Lillis	President & CEO
A. Gary Ames	President & CEO, U S WEST International
Stephen A. Boyd	President & CEO, U S WEST Marketing Resources Group, Inc.
John O'Farrell	President, U S WEST Interactive Services, Inc.
Thomas E. Pardun	President & CEO, U S WEST Multimedia Communications
Janice C. Peters	President, Wireless Operations
Amos Hostetter	CEO, Domestic Cable
Douglas D. Holmes	EVP Finance and Strategy for Domestic Cable
Roger K. Christensen	VP Group Operations and Strategy
Patti A. Klinge	VP, Human Resources
Judith A. Servoss	VP, Public Relations

Source: U S WEST

Company Strategy

U S WEST Communications Group

The Communications Group's strategy is to offer integrated communications, entertainment, information, and transaction services over both wired and wireless networks to its customers primarily within its 14-state region. Key initiatives to support this strategy include:

- Providing superior customer service
- Building customer loyalty
- Enhancing network capacity and capability

Exhibit A U S WEST Communications Group Organization Structure

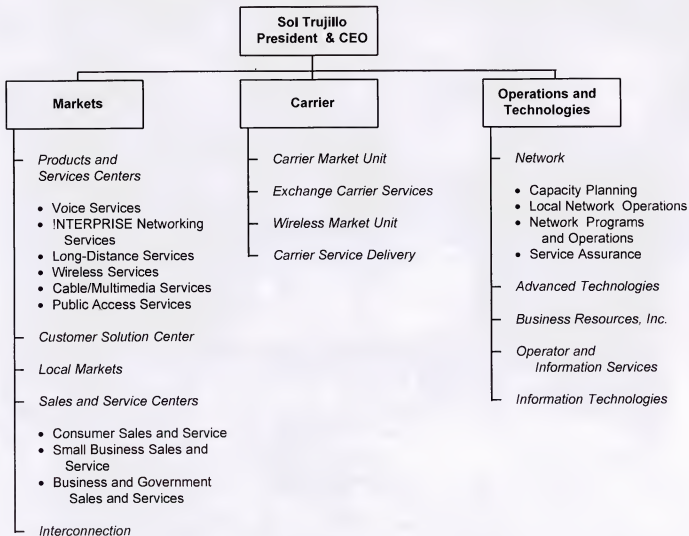
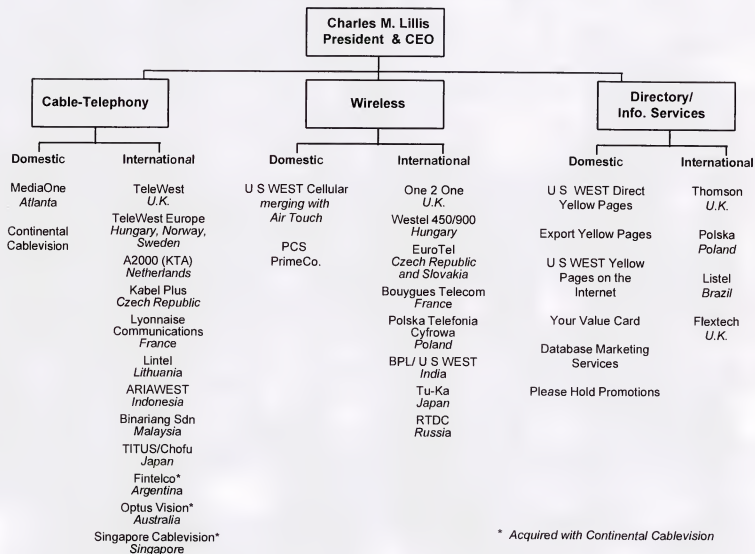


Exhibit B

U S WEST Media Group Organization Structure



- Expanding products and services
- Ensuring a fair competitive environment

Strategic initiatives to attract and retain customers include:

- Enhancing existing services with products such as caller identification, call waiting, and voice messaging
- Aggressive expansion of data services
- Pursuing opportunities to offer paging, wireless, and cable television services
- Rapid entry into the interLATA long-distance market

U S WEST Media Group

The Media Group's strategy is based on the belief that communication and commerce are migrating from other mediums to electronic networks. Over time, this global phenomenon will result in networks replacing traditional distribution channels.

- To meet the needs of this growing market, the Media Group provides local connections and then integrates market-based service offerings to meet the needs of end users.

- The Media Group executes this strategy through three lines of business—cable and telecommunications, wireless, and directory and information services—in selected high-growth markets worldwide.

- The group intends to provide highly clustered customer access to hybrid fiber-coax broadband networks for delivery of video, data, telephony, and multimedia services.

Financials

U S WEST's consolidated revenue for 1995 was \$11.75 billion, up from \$10.95 billion for 1994. Net income was over \$1.3 billion, compared to \$1.43 billion for 1994. A three-year consolidated financial summary for U S WEST, Inc. is shown below.

U S WEST, Inc.
Three-Year Financial Summary
(\$ Millions, except per-share data)

Item	Fiscal Year		
	1995	1994	1993
Revenue	\$11,746	\$10,953	\$10,294
Income before taxes and extraordinary items	\$2,154	\$2,283	\$745
Net income (loss) (a)	\$1,317	\$1,426	\$(2,806)
Earnings (loss) per share (a)	N/A	\$3.14	\$(6.69)

(a) 1993 results include an extraordinary charge of \$3.12 billion (\$7.45 per share) associated with the decision to discontinue application of SFAS No. 71.

Separate financial results for U S WEST Communications Group and U S WEST Media Group are shown on the following pages.

Revenue Analysis by Product/Service

Three-year source of revenue summaries for the U S WEST Communications and Media Groups follow the financial summaries.

U S WEST Communications Group
Three-Year Financial Summary
(\$ Millions, except per-share data)

Item	Fiscal Year		
	1995	1994	1993
Revenue	\$9,484	\$9,176	\$8,870
• Percent change from previous year	3%	3%	4%
Income before taxes and extraordinary items	\$1,846	\$1,803	\$599
• Percent change from previous year	2%	201%	(a)
Net income (loss)	\$1,176	\$1,150	\$(2,809)
• Percent change from previous year	2%	141%	(b)
Pro forma earnings per share	\$2.50	\$2.53	N/A
• Percent change from previous year	--	--	--

(a) Includes restructuring charges of \$880 million.

(b) Includes an extraordinary charge of \$3.12 billion (\$7.45 per share) associated with the to discontinue application of SFAS No. 71.

U S WEST Media Group
Three-Year Financial Summary
(\$ Millions, except per-share data)

Item	Fiscal Year		
	1995	1994	1993
Revenue	\$2,374	\$1,908	\$1,549
• Percent change from previous year	24%	23%	12%
Income before taxes	\$308	\$480	\$146
• Percent change from previous year	(15%)	229%	(a)
Net income	\$141	\$276	\$3
• Percent change from previous year	49%	*	--
Pro forma earnings per share	\$0.29	\$0.61	N/A
• Percent change from previous year	(36%)	--	--

* Percent change exceeds 1,000%.

(a) Includes restructuring charges of \$120 million.

U S WEST Communications Group
Three-Year Source of Revenue Summary
(\$ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Local service	\$4,344	46%	\$4,067	44%	\$3,829	43%
Interstate access	2,378	25%	2,269	25%	2,147	24%
Intrastate access	747	8%	729	8%	682	8%
Long-distance network	1,189	12%	1,329	14%	1,442	16%
Other services (a)	826	9%	782	9%	770	9%
Total	\$9,484	100%	\$9,176	100%	\$8,870	100%

(a) Includes billing and collection services provided to interexchange carriers, voice messaging services, high-speed data transmission services, sales of service agreements for inside wiring and customer premises equipment.

U S WEST Media Group
Three-Year Source of Revenue Summary
(\$ Millions)

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Directory and information services	\$1,180	50%	\$1,075	56%	\$956	62%
Wireless communications	941	40%	781	41%	561	36%
Cable and telecommunications	215	9%	18	1%	--	--
Other	38	1%	34	2%	32	2%
Total	\$2,374	100%	\$1,908	100%	\$1,549	100%

Interim Results

U S WEST Communications Group reported revenue of \$7.48 billion for the nine months ending September 30, 1996, up 6% over \$7.05 billion for the same period in 1995.

- Net income was \$938 million, a 5% increase over \$895 million for the same period a year ago.

- ENTERPRISE, the data networking services division, reported a revenue increase of more than 100% compared with the same period a year ago.

U S WEST Media Group reported revenue of \$1.96 billion for the nine months ending September 30, 1996, up 14% over \$1.72 billion for the same period in 1995.

- Revenue from directories increased 6%, wireless increased 29%, and cable increased 7%.
- Net income was \$10 million, compared to \$69 million for the same period a year ago.

Market Financials

U S WEST's revenue is derived from residential and business customers in a range of industries.

The largest volume of the Communications Group's services are provided to AT&T. During 1995, 1994, and 1993, revenue related to those services provided to AT&T were approximately \$1.08 billion, \$1.13 billion, and \$1.16 billion, respectively.

Geographic Markets

International revenue is derived from directory publishing services provided in Europe. These revenues were \$122 million, \$44 million, and \$7 million in 1995, 1994, and 1993, respectively.

U S WEST's investments in international cable-telephony and wireless operations are accounted for under the equity method.

Approximately 97% of the revenue of the Communications Group comes from U S WEST Communications, Inc., of which approximately 59% is derived from the states of Arizona, Colorado, Minnesota, and Washington.

Acquisitions

In November 1996, U S WEST Media Group closed its merger with Continental Cablevision, Inc.

- Continental, based in Boston (MA) with approximately 7,000 employees, is the nation's third largest broadband telecommunications company, serving more

than 4.2 million customers in 20 states. Continental is also part owner of companies providing cable television service in Argentina and Singapore and broadband communication services in Australia. Continental's total 1995 revenue was \$1.44 billion.

- Continental's domestic customers are highly clustered in six large markets—New England, California, Chicago, Michigan, Ohio, and Florida.
- The \$5.3 billion equity portion of the merger agreement calls for consideration of \$1 billion in U S WEST preferred stock, convertible to Media Group common stock; \$1.15 billion in cash; and 150.6 million shares of U S WEST Media Group common stock, valued by Continental at \$21 a share.
- U S WEST also announced that it plans to repurchase up to \$350 million of Media Group common stock, subject to market conditions.
- Approval for the merger from the FCC requires that U S WEST divest itself of Continental cable properties in the U S WEST Communications 14-state service territory. The U.S. Department of Justice approval requires that U S WEST divest itself, in stages, of Continental's interest in Teleport Communications Group.
- Amos B. Hostetter, Jr., formerly chairman and CEO of Continental, has been appointed head of all Media Group domestic cable operations.
- The merger strengthens U S WEST's position in the cable industry and advances the company's long-stated strategy to provide broadband services in key local markets around the globe.

In July 1996, U S WEST Media Group acquired a 10% minority investment in Preview Media, one of the world's largest on-line travel providers, sells airline tickets and vacation packages on line via America Online and the World Wide Web. U S WEST intends to package Preview Media's services with the locally focused network of Web services it offers.

In December 1994, U S WEST completed a \$1.2 billion acquisition of Wometco Cable Corp, Georgia Cable Partners, and Atlanta Cable Partners, representing cable television systems serving a large portion of the Atlanta (GA) metropolitan area. These operations have been combined to form MediaOne.

In May 1994, U S WEST acquired Thomson Directories of the U.K.

Employees

As of December 31, 1995, U S WEST had 61,047 employees, including 50,825 employees from the U S WEST Communications Group.

U S WEST currently has approximately 61,000 employees.

Key Products and Services

U S WEST's current operations are provided through the following business units:

U S WEST Communications Group

This group provides local telephone services, long-distance services within specified calling areas (LATAs), local phone interconnections to interstate long-distance companies, and operator services.

- It also provides telecommunications and high-speed data networking services, customer premise equipment, custom calling features, voice messaging, and caller

identification to business customers and government agencies nationwide.

- U S WEST Communications also plans interLATA long-distance, wireless/PCS, and video offerings.

The group has three major business units—Markets, Carrier, and Operations and Technologies.

- The Markets organization has product, marketing, and sales and service units that work together to develop, market, and deliver communications packages to various customer groups. This unit also leads strategic planning and resource allocation, brand positioning, market research, and competitive intelligence, as well as other marketing, sales, and service functions.
- The Carrier unit is responsible for providing network access and services to interexchange carriers (including long-distance and wireless companies), and telecommunications services to independent local exchange telephone companies.
- Operations and Technologies provides research and development, underlying network services, and systems development for U S WEST Communications.

Information services-related activities are summarized below:

- U S WEST continues to deploy U S WEST Network 21, its fiber optic, bidirectional SONET ring architecture supporting high-capacity services. Service is available in Denver, Phoenix, and Seattle.
- The !NTERPRISE division provides U S WEST's family of high-speed data networking services.

- High-speed data communications services provided include frame relay, ATM, Transparent LAN Service, Private Line LAN Interconnect, and Switched Multi-Megabit Data Service (SMDS)
- By the end of 1996, the company expects to have 38,000 frame relay ports in service.
- The division has begun to implement FT-1 Frame Relay Service in preparation for entering the interLATA market. This offering will allow !NTERPRISE to package local and long-distance data services for lower cost, one-stop shopping.
- In the third quarter of 1996, !NTERPRISE introduced Audio Conferencing Dial Out Services and began a controlled introduction of its new Managed Data Services, a suite of services that helps customers build and manage data networks.
- !NTERACT is an Internet-based desktop computer networking service for business-to-business communications.
- !NTERACT Basic Service provides Internet connectivity, including applications such as e-mail, World Wide Web access, FTP, and Usenet newsgroups.
- !NTERACT Market and Commerce Service options include electronic commerce features, Web page hosting and Web transactions, and premium subscriber services such as firewall security, Web blocking, and secure virtual private networks over the Internet.
- !NTERACT Collaborative Computing Services provide businesses with an opportunity to outsource collaborative computing applications that they would

otherwise have to create, manage, and maintain themselves. These services are based on a variety of Lotus Notes applications.

- !NTERACT Transaction Computing Services provide an infrastructure for secure electronic business transactions between subscribers for easier processing of electronic forms, workflow, and financial transactions.
- U S WEST is teaming with several vendors to deliver !NTERACT, including Microsoft (systems management services, SNA and SQL gateway services, and messaging via MS Exchange through Microsoft Windows NT BackOffice), Netscape (Netscape Navigator), Lotus (Lotus Notes), and Cisco Systems (enterprise internetworking platform and protocol support, security, and management features).

- VMS Interactive Messaging, introduced in 1996, expands the company's Voice Messaging Services (VMS) to include message-send functions to individuals and groups, message return, and paging notification.

Other units with the Communications Group include the following:

- Business Resources, Inc. provides procurement, purchasing, and warehousing.
- Communications Services, Inc. provides customer premises equipment and data networking services nationwide.
- Federal Services, Inc. provides telecommunications services to government agencies.

- Advanced Technologies, Inc. provides research and development services.
- Communications Systems Corp. provides long-distance services.

U S WEST Media Group

The Media Group is comprised of:

- Cable and telecommunications network businesses outside of the Communications Group region and internationally
- Domestic and international wireless communications network businesses
- Domestic and international directory and information services businesses

Cable and telecommunications businesses include the following:

- Domestic cable and telecommunications operations are conducted through U S WEST Multimedia Communications, Inc. and consist of domestic cable properties and investments outside of the Communications Group's region, including MediaOne cable systems in Atlanta (GA) and U S WEST's investment in Time Warner Entertainment Company (TWE), the second largest provider of cable television services in the U.S.
- Operations of the newly acquired Continental Cablevision
- International cable and telecommunications operations are conducted through U S WEST International Holdings, Inc. and include interests in cable and/or telecommunications properties in the Netherlands, Sweden, Norway, Hungary, the Czech Republic, Malaysia, and Indonesia.
- To decrease investment risk and gain access to technical skills and capabilities, U S WEST International's strategy has been to make these investments with other major cable television companies, including Time Warner and Tele-Communications, Inc.
- U S WEST International owns a 26.8% interest in TeleWest plc, the largest provider of combined cable television and residential and business telecommunications services in the U.K.

Domestic wireless services are provided through U S WEST Cellular, Inc. primarily in the Communications Group's 14-state region.

- During 1994, U S WEST formed an agreement with AirTouch Communications to combine their domestic cellular assets, with equity ownership of 70% by AirTouch and 30% by U S WEST. The combination will take place in two phases.
- Under Phase I, begun in November 1995, the two companies are operating their cellular properties separately. A Wireless Management Company (WMC) has been formed and is providing centralized services to both companies on a contract basis.
- In Phase II, AirTouch and U S WEST will contribute their domestic cellular assets to the WMC. U S WEST will reflect its share of the combined operating results of the WMC using the equity method of accounting. Phase II is expected to close by early 1997.
- U S WEST has entered into a venture with AirTouch, Bell Atlantic, and NYNEX to form a strategic national marketing and technical wireless alliance. To improve operations of the four partners, the alliance sets technical and service standards, establishes joint

purchasing agreements, administers roaming capabilities, implements network plans, and manages distribution channels and accounts on a national basis.

- U S WEST has also entered into a separate venture with the same partners to provide personal communications services (PCS). The venture, known as PCS PrimeCo., acquired rights to 11 licenses in 1995 covering Chicago, Dallas, Honolulu, Jacksonville, Miami, Milwaukee, New Orleans, Richmond, San Antonio, and Tampa.

International wireless—U S WEST International owns interests in wireless communications systems or investments in several countries, including the U.K., Malaysia, Russia, Hungary, the Czech Republic, the Slovak Republic, and Japan.

Directory and information services—Through U S WEST Marketing Resources, the company provides directory publishing as well as database marketing and interactive services.

- U S WEST Direct publishes, prints, and sells advertising in more than 300 White and Yellow Pages directories in the Communications Group region.
- U S WEST also provides database marketing services that enable businesses to segment and target customers, including direct mail lists.
- Effective January 1997, U S WEST Dex will be the new directory brand name and will also become the new company name, replacing U S WEST Direct, U S WEST Marketing Resources, and U S WEST Market Information Products.

- Through Thomson Directories, U S WEST International annually publishes 156 directories in the U.K.
- U S WEST International also owns a 50% interest in Listel, Brazil's largest telephone directory publisher and 100% of Polska, which publishes 32 directories in Poland.
- U S WEST Interactive Services Group develops and acquires interactive television and on-line applications for the Internet and interactive television.
 - The group and *The Orlando Sentinel* are jointly marketing Gotv, an interactive television entertainment guide, on Time Warner Cable's Full Service Network. Using Gotv, customers view first-run movie previews, watch film reviews, research theater and show times, scan restaurant menus, and determine locations of local events and attractions.
 - In October 1996, the company announced plans to introduce DIVE INSM, an Internet-based local on-line service that will give area residents access to community information in ten metropolitan areas across the U.S. Information will fall into ten categories—Entertainment, Sports & Recreation, Media/News, Marketplace & Shopping, Schools and Learning, Business & Career, Health & Wellness, Community Life, Getaways & Travel, and Lifestyles & Hobbies. Content will be provided through partnerships with various vendors.
 - TheTrip.com, launched in October 1996, is targeted to independent business travelers. By accessing TheTrip.com site on the World Wide Web, users can make airline, hotel, and car reservations; access travel guides, interactive maps, and

weather reports; and get real-time radar flight status data.

- The U S WEST Yellow Pages on the Internet (<http://yp.uswest.com>), launched in June 1996, provides more than 22 million nationwide Yellow Pages business listings, nearly 70 million residential White Pages listings covering all 50 states, about eight million residential e-mail addresses, maps for more than 10,000 businesses (MapQuest), and local news and community information covering 300 major U.S. cities.

- Business information for the 6,000 communities in which U S WEST publishes Yellow Pages continues to come from the U S WEST database.

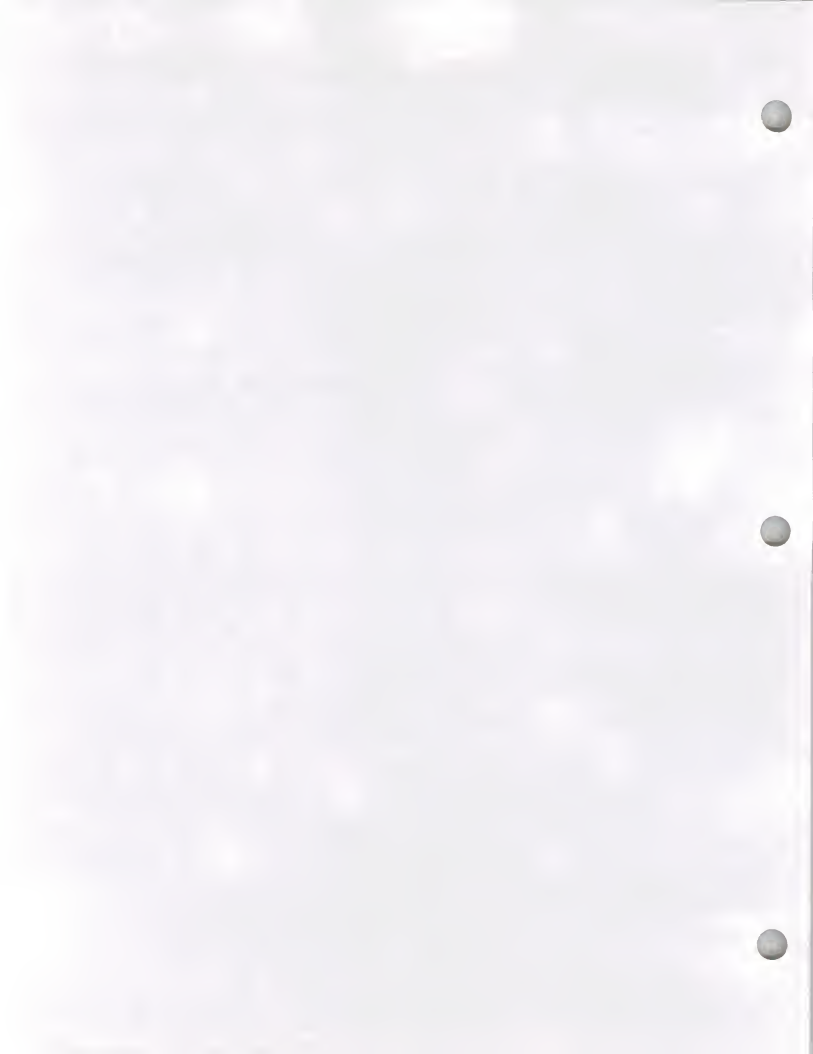
- Business listings for the other 36 states are being supplied by an outside vendor, Database America.

Your Value Card is a promotional reach program with measured response. Buyers receive savings through an electronic savings card while sellers gain insights about customers and their buying habits. More than 40% of consumer households have used the card in Denver.

Please Hold Promotions offers telephone on-hold advertising and promotional messages.

Marketing and Sales

U S WEST markets its products and services through a direct sales force.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

December 1996

UUNET Technologies, Inc.

Chairman: Richard L. Adams, Jr.
CEO: John W. Sidgmore
3060 Williams Drive
Fairfax, VA 22031-4648
Phone: (703) 206-5600
Fax: (703) 206-5601
Internet: <http://www.uu.net>

Status:	Subsidiary
Parent:	MFS Communications Company, Inc.
Employees:	607 (11/96)
Revenue:	\$94,461,000
Fiscal Year End:	12/31/95

Key Points

- UUNET Technologies, Inc. provides a range of Internet access options, World Wide Web hosting services, security products, and consulting services to businesses, professionals, and on-line service providers.
- In December 1996, UUNET and its parent company, MFS Communications Company, Inc., jointly announced a new family of extranet services called ExtraLinkSM, using exclusive technology to provide an end-to-

end guarantee of Internet reliability and performance. These jointly developed services will allow businesses to use Internet protocols to communicate and share information internally and with external business partners.

- Also in December 1996, UUNET and MFS announced plans to offer a new, unswitched xDSL service early in the first quarter of 1997.
- In November 1996, UUNET increased its ownership interest in EUnet Deutschland GmbH from 40% to 100%.
- In October 1996, UUNET announced its Global TransitSM Service to offer European and Asian Internet service providers high-

performance connectivity with North America and direct connectivity between Asia and Europe.

- In October 1996, UUNET formed the Web Services Business Unit to focus exclusively on Web hosting and related opportunities. The unit is comprised of sales, marketing, and technical resources.
- In August 1996, UUNET and MFS Communications Company, Inc. completed a merger of the two companies, with MFS accounting for the merger as a purchase.
- In July 1996, GTE and UUNET entered into an agreement whereby GTE selected UUNET to provide nationwide Internet services in 46 states.
- In July 1996, UUNET completed its acquisition of Metrix Interlink, a Canadian Internet service provider. This acquisition, in conjunction with the acquisition of UUNET Canada, gives UUNET a major presence in the Canadian marketplace.
- In April 1996, UUNET increased its equity ownership of UUNET Canada, Inc. from 20% to 51%.
- In March 1996, UUNET acquired a 40% interest in EUnet Deutschland GmbH, a provider of Internet access options, applications, and consulting services in Germany.
- In November 1995, UUNET acquired Unipalm Group plc, a provider of Internet access options, networking software, training, and consulting services in the U.K. and Europe.

Company Description

UUNET, formed in 1987, is an operating company subsidiary of Omaha (NE)-based MFS Communications Company, Inc., a leading provider of communications services for business and government.

In August 1996, MFS and UUNET completed the merger of the two companies, which was accounted for by MFS as a purchase. The transaction was valued at approximately \$2 billion.

- Under the terms of the agreement, each share of UUNET common stock was converted into approximately 1.77 shares of MFS common stock.
- Prior to the August merger, MFS reported revenues of \$416 million for the first two quarters of 1996.
- MFS, through its operating company subsidiaries, provides one-stop services for integrated local and long-distance services as well as a wide range of high-quality voice, data, Internet, and other enhanced services and systems.
- In August 1996, MFS and WorldCom, Inc. announced a definitive agreement to merge the two companies in an exchange of stock with an approximate value of \$14 billion. The merger is expected to be completed in late 1996 or early 1997, and the combined company will be known as MFS WorldCom.

UUNET's Internet access options include dedicated and dial-up Internet access ranging from 14.4 and 28.8 Kbps to 128 Kbps ISDN dial access, and from 56K to 45 Mbps dedicated leased-line connectivity. The company also offers an Internet security

product family including the Gauntlet™ Firewall System—a hardware and software Internet firewall solution—as well as complete security consulting services.

UUNET's other applications and services include World Wide Web server hosting and content development services, client and LAN software options, and network integration and consulting services.

UUNET's network is comprised of 845 Points of Presence (POPs) worldwide, 329 throughout the U.S. and 516 in Canada, Europe, and the Asia/Pacific region, as well as connections to other Internet service providers around the world.

UUNET's customers are organizations and professionals in many lines of business. As of July 1996, the company's customer base had grown to more than 25,000 businesses.

In May 1995, UUNET made an initial public offering of 4.725 million shares of its common stock, of which 4.6 million were sold by UUNET and the remainder by selling stockholders. Net proceeds to the company of approximately \$59 million were used to expand and upgrade its network infrastructure, to reduce debt, and for general corporate purposes.

Organization and Structure

UUNET is headquartered in Fairfax (VA).

The company's officers are summarized below:

UUNET Key Executives

Name	Position
Richard L. Adams	Chairman and Founder
John W. Sidgmore	CEO
Kirby "Buddy" Pickle	President and COO
Jeffrey G. Hilber	CFO
Heidi Heiden	SVP, Operations & Technology
Joseph Squarzini	SVP, Technology Integration
David R. Boast	VP, Microsoft Division
Michael D. O'Dell	VP, Chief Scientist
Eric Scace	VP, International Development
Jeffrey S. Osborn	VP, International Sales
Clint Heiden	VP, Sales
Alan B. Taffel	VP, Marketing
Diana E. Lawrence	VP, Human Resources

Source: UUNET

Company Strategy

UUNET's objective is to be the leading supplier to businesses and professionals of complete communications solutions using Internet-related technologies. UUNET intends to achieve this position by continuing to focus on:

- Expanding high-performance network infrastructure.* The company currently includes 19 international gateway hubs and allows local access to customers in 845 cities, including 516 outside the U.S. UUNET plans to continue expansion of its network infrastructure by acquiring significant undersea and European terrestrial fiber optic cable capacity. The company feels this would significantly decrease its per-unit cost of bandwidth.
- Intensifying focused marketing efforts.* UUNET is continuing to expand and tailor its sales and marketing efforts to reach large commercial accounts, professionals, and resellers more effectively. The company also intends to coordinate its focus on worldwide brand recognition and

awareness of its product and service offerings.

- *Expanding and integrating product and service offerings.* UUNET is continuing to integrate and further expand its suite of value-added products and services to provide customers with a complete communications solution using Internet technologies, including enhanced security products and consulting services, additional access and software options, and a range of Web server hosting and content development products and services.
- *Building and leveraging relationships with strategic partners.* UUNET is continuing to build and leverage strategic relationships with providers of on-line services, Internet applications, and other products and services in targeted industries. UUNET expects these relationships to help increase geographic coverage and network capacity, expand its product and service offerings, and more effectively reach its target markets.
- *Expanding operations worldwide.* UUNET significantly expanded its operations outside the U.S. during 1995 and 1996 through acquisitions. The company intends to accelerate its geographic expansion and expects to pursue various partnering arrangements to facilitate this expansion, including joint ventures, acquisitions, and commercial arrangements.
- In 1995, UUNET initiated, and aggressively pursued, a strategy of international expansion. The company has established international gateway hubs in 15 countries, including Australia, Canada, France, Germany, Hong Kong, Italy, the U.S., Japan, Monaco, The Netherlands, Sweden, Switzerland, the U.K., and Singapore.

- These hubs, which concentrate and route data traffic from UUNET's dedicated and dial-up customers as well as from the dial-up customers of The Microsoft Network, provide service in seven cities in Canada (Calgary, Edmonton, Montreal, Ottawa, Toronto, Vancouver, and Winnipeg); eight cities in Europe (Amsterdam, Cologne, London, Milan, Paris, Stockholm, Monaco, and Zurich); three cities in Asia (Hong Kong, Singapore, and Tokyo); and in Sydney (Australia).

Financials

UUNET's 1995 revenue reached \$94.5 million, a 185% increase over restated revenue of \$33.1 million for 1994. The company incurred net losses of \$18.3 million in 1995 compared to losses of nearly \$8 million in 1994.

- Results for 1994, 1993, 1992, and 1991 have been restated to reflect the acquisition of Unipalm Group plc, which was recorded as a pooling of interests.
- In order to make Unipalm's fiscal year end of April 30 conform to UUNET's calendar year end, Unipalm's financial results for the fiscal year ended April 30, 1994 have been combined with UUNET's results for its year ended December 31, 1993. Unipalm's revenue for the four-month period (January 1, 1994 through April 30, 1994) was approximately \$6.1 million.
- UUNET's revenue, excluding the results of Unipalm, was \$57.38 million, \$12.4 million, and \$7.9 million in 1995, 1994, and 1993, respectively. Net income (loss) was \$0.47 million in 1995, (\$6.9 million) in 1994, and (\$2.3 million) in 1993.

A five-year financial summary is shown on the following page.

UUNET's 1995 results were attributed to the following:

- Network services revenue increased 324% in 1995, primarily as a result of increases in the number of dedicated high-speed connections (from 734 to 2,292) and upgrades to higher-speed connections (from 53 to 369).
- Network services revenue increases were also attributed to the build-out of the dial-

up network for Microsoft. Revenue from Microsoft totaled approximately \$19.3 million in 1995.

- Software revenue for Unipalm grew 41% in 1995, due primarily to the increased demand for TCP/IP and Network File System (NFS) products and the significant increase in the number of sales and marketing personnel.

**UUNET Technologies, Inc.
Five-Year Financial Summary (a)
(\$ Millions, except per-share data)**

Item	Fiscal Year				
	1995	1994	1993	1992	1991
Revenue	\$94.5	\$33.2	\$24.0	\$20.4	\$14.2
• Percent change from previous year	185%	(c) 38%	(c) 18%	44%	N/A
Income (loss) before taxes	\$(18.7)	\$(7.9)	\$(1.8)	\$1.5	\$1.7
• Percent change from previous year	(b) (137%)	(339%)	(220%)	(12%)	N/A
Net income (loss)	\$(18.3)	\$(8.0)	\$(2.0)	\$1.1	\$1.3
• Percent change from previous year	(b) (129%)	(300%)	(282%)	(15%)	N/A
Pro forma loss per share	\$(0.63)	\$(0.35)	N/A	N/A	N/A
• Percent change from previous year	(b) (80%)	N/A	N/A	N/A	N/A

- (a) Financial results for 1994, 1993, 1992, and 1991 are restated to include the results of Unipalm, acquired in November 1995. Consolidated results for 1993, 1992, and 1991 reflect the statement of operations of Unipalm for its fiscal years ended April 30, 1994, 1993, and 1992, respectively.
- (b) Includes costs of approximately \$11.1 million during the fourth quarter of 1995 related to the acquisition of Unipalm.
- (c) Consolidated results for the year ended December 31, 1993 include the four-month period ended April 30, 1994, which is also included the consolidated results for the year ended December 31, 1994. Unipalm's revenue for the four-month period was approximately \$6.1 million.

Revenue Analysis by Product/Service

Approximately 76% of UUNET's 1995 revenue was derived from network services (Internet access) and the remaining 24% from the sale of Internet-related third-party software.

- Internet services revenue increased 324% in 1995, compared to 68% in 1994.

- Software revenue, generated by Unipalm, grew 41% in 1995, compared to 16% in 1994.

A three-year source of revenue summary for the consolidated company is shown below.

**UUNET Technologies, Inc.
Three-Year Source of Revenue Summary
(\$ Millions)**

	Fiscal Year					
	1995		1994		1993	
Product/Service	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Network services	\$71.5	76%	\$16.9	51%	\$10.0	42%
Software	22.9	24%	16.3	49%	14.0	58%
Total *	\$94.5	100%	\$33.1	100%	\$24.0	100%

* Difference due to rounding

Interim Results

UUNET's revenue for the six months ending June 30, 1996 reached \$100 million, compared to \$35.0 million for the same period in 1995.

Net income for the period was \$1.3 million, compared to a net loss of \$2.1 million for the same period a year ago.

Market Financials

UUNET derives its revenue from customers in a range of businesses, including telecommunications, on-line and information services, financial services, computer software, manufacturing utilities,

newspapers, computer systems and services, banking, publishing, and government.

Geographic Markets

Approximately 63% of UUNET's 1995 revenue was derived from the U.S. and the remaining 37% from international sources. A three-year geographic source of revenue summary for the consolidated company is shown below.

Prior to the acquisition of Unipalm, virtually 100% of UUNET's revenue was derived from the U.S.

UUNET Technologies, Inc.
Three-Year Geographic Source of Revenue Summary
(\$ Millions)

Geographic Market	Fiscal Year					
	1995		1994		1993	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
U.S.	\$59.3	63%	\$14.0	42%	\$8.0	33%
Europe	34.4	36%	19.0	57%	15.7	66%
Other	0.8	1%	0.1	1%	0.3	1%
Total	\$94.5	100%	\$33.1	100%	\$24.0	100%

Acquisitions

Recent acquisitions made by UUNET include the following:

- In November 1996, UUNET purchased 60% of Dortmund (Germany)-based EUnet Deutschland GmbH, a leading Internet service provider in Germany, for \$12 million in cash. In March 1996, UUNET had acquired a 40% equity ownership interest in EUnet for \$1.6 million.
- EUnet provides a range of Internet access services, applications, and consulting services, ranging from simple dial-up Internet access, leased-line Internet access, and closed-user-group networks to special consulting services, including Web hosting.
- EUnet currently operates 36 POPs on a 2 Mbps leased-line backbone network covering nearly 80% of Germany.
- As of December 31, 1995, EUnet had approximately 2,000 customer accounts.
- EUnet's 1995 results included a loss of approximately \$3.8 million on revenue of approximately \$8.6 million.
- In July 1996, UUNET completed its acquisition of Metrix Interlink, a leading Internet provider in Canada, issuing 199,939 shares of UUNET common stock.
- Metrix specializes in high-speed corporate connections to the Internet and backbone services for large networks.
- As of July 1996, Metrix had POPs in Montreal, Toronto, Ottawa, and Quebec City.
- The Metrix operations are being combined with those of UUNET Canada, producing the largest high-bandwidth Internet infrastructure in Canada.
- In April 1996, UUNET increased its equity ownership of Toronto-based UUNET Canada from 20% to 51%, for approximately \$3.6 million in cash and 27,079 shares of common stock valued at approximately \$0.7 million.

- The financial statements of UUNET Canada were consolidated with UUNET's financial statements beginning with the second quarter of 1996.
- UUNET Canada provides Internet services, allowing local access to users in 13 Canadian cities, via dedicated ISDN access and leased lines.
- As of December 31, 1995, UUNET Canada had approximately 800 business and professional customers and 40 employees.
- UUNET Canada's fiscal 1995 results included an operating loss of approximately \$75,000 on revenue of approximately \$1.6 million.
- In November 1995, UUNET acquired Unipalm Group plc, one of the largest providers of Internet access options, software, training, and consulting services in Europe, and among the largest Internet access providers in the U.K.
- The terms of the pooling-of-interests acquisition were not disclosed.
- Unipalm conducts business principally in the U.K., with investments and other relationships with Internet service providers in parts of Europe and Africa.
- As of December 31, 1995, Unipalm had 243 employees, including 116 in sales and marketing, 99 in network operations and technical support, and 28 in general and administrative functions.

- Unipalm's principal offices are located in Cambridge (U.K.), as is its network operations center.

Employees

As of December 31, 1995, UUNET had 309 employees, segmented as follows:

Marketing and sales.....	95
Network operations.....	177
General and administrative.....	<u>37</u>
	309

As of the end of November 1996, the company had 607 employees.

Key Products and Services

UUNET provides a range of Internet access options, applications, and consulting services. The company's solution has been designed to address many of the issues that have discouraged businesses and professionals from using the Internet in the past.

UUNET's Internet access options are summarized in Exhibit A on the following page.

Network Infrastructure

UUNET's network infrastructure enables customers to access the Internet through dedicated lines or by placing a local telephone call (dial-up) through a modem to the nearest UUNET point of presence (POP).

- Once connected, the customer's traffic is routed through UUNET's network infrastructure to the desired Internet location, whether on the company's network or elsewhere on the Internet.

Exhibit A
UUNET Internet Access Options

Service Type	Current List Price	Summary/Description
Dedicated Full Internet Access <ul style="list-style-type: none"> - 56 Kbps/128 Kbps - T-1 - Multi-Megabit - Wholesale 	<ul style="list-style-type: none"> \$425-\$850/month; \$495-\$795 startup fee \$1,250-\$3,000/month; \$5,000 startup fee \$4,000-\$49,500/month; \$5,000-\$7,000 startup fee \$2,000-\$49,500/month; \$5,000-\$8,000 startup fee 	<ul style="list-style-type: none"> Medium-speed service via dedicated lines or frame relay for small to midsize businesses High-speed service for large businesses or organizations with significant throughput requirements Very high-speed service for very large businesses or organizations with demanding throughput requirements High-speed service for those intending to resell Internet access
Dial-up Full Internet Access <ul style="list-style-type: none"> ■ AlterDial (analog or ISDN) ■ - Internet 9-5SM 	<ul style="list-style-type: none"> \$30/month (includes 25 hrs/ month) \$2/hour for additional usage; \$25 startup fee (\$50 for ISDN accounts) \$70-\$395/month; \$195-\$395 startup fee 	<ul style="list-style-type: none"> Low-speed access for occasional use Medium-speed access for small businesses or LAN-based workgroups, for occasional use
Dial-up Limited Internet Access <ul style="list-style-type: none"> - UUCP - Shell Accounts 	<ul style="list-style-type: none"> \$36 base fee, plus \$2.60-\$16/hour \$20/month, 20 hours of connect time 	<ul style="list-style-type: none"> UUCP protocol-based service for those requiring only electronic mail and news access Access for those familiar with UNIX and not requiring high-speed throughput or a GUI
Security Services <ul style="list-style-type: none"> - GauntletTM Internet Firewall System - Security Consulting 	<ul style="list-style-type: none"> \$15,000 (one-time fee), including software, hardware, installation, configuration, and training \$2,000/day 	<ul style="list-style-type: none"> Advanced application proxy gateway firewall for businesses concerned about Internet security Network security design and site audits for businesses needing assistance implementing a company-wide security policy
Web Server Hosting <ul style="list-style-type: none"> - Standard (T-1 connection) - Premium (10 Mbps connection) 	<ul style="list-style-type: none"> \$300-\$750/month; \$400-\$450 startup fee \$750-\$5,400/month; \$700-\$850 startup fee 	<ul style="list-style-type: none"> For businesses that wish to have a high-powered Web presence without the responsibility of hosting it internally. Both UNIX and NT platforms are available; secure transaction feature is available

- In response to the increase in the number of customers purchasing UUNET's Internet access services, particularly UUNET's high-speed T-1 access options, UUNET has upgraded its network infrastructure by building a new, higher-capacity backbone. It includes Cisco 7000 routers, Cascade 9000 switches and a DS-3 (45 Mbps) frame relay-based network backbone. This new network infrastructure provides higher bandwidth, increased throughput and reliability, and greater capacity at a lower cost than the previous infrastructure.
- UUNET uses fractional DS-3 lines in Canada, Europe, and in the Asia/Pacific region to interconnect those hubs and the U.S.

UUNET's network infrastructure currently allows local access to users in 845 cities, including 516 international sites.

In October 1996, UUNET announced its Global TransitSM Service, the industry's first transit service to offer European and Asian Internet service providers (ISPs) high-performance, high-reliability connectivity with North America and direct connectivity between Asia and Europe.

- Global Transit Service currently provides ISPs with local, cost-effective access to the UUNET global Internet infrastructure in ten countries outside of North America. The company plans to offer the service in four additional countries.
- The Global Transit Service combines regional routing, direct connectivity to North America, and direct routes between Asia and Europe, all via a single local connection.

- Global Transit Service is currently available in London (U.K.), Paris (France), Amsterdam (the Netherlands), Frankfurt (Germany), Milan (Italy), Monaco, Tokyo (Japan), Hong Kong, Singapore, and Sydney (Australia).

UUNET's network operations group, located at the company's network operations center in Virginia, is responsible for continuously monitoring traffic across the company's network 24 hours per day, seven days per week. Technical support personnel (available from 8 a.m. to 8 p.m. ET, Monday through Friday) work to find solutions for customers experiencing difficulties with Internet applications. At other times, network operations personnel respond to technical support requests.

Security Products and Services

UUNET addresses the confidentiality and security concerns of its customers by offering the following security products and services:

The Gauntlet Internet Firewall System, resold by UUNET under license from Trusted Information Systems, Inc., is a firewall software product (a system placed between networks designed to prevent unauthorized access through the Internet to a customer's network and proprietary data). Gauntlet typically sells for \$15,000, including hardware and installation.

UUNET also performs security audits of customers' facilities and other security consulting services for a daily fee.

Web Services

UUNET makes available various services to customers, including the design, development, hosting, and maintenance of

Web sites and content on the World Wide Web.

- UUNET will install and maintain Web sites on a UUNET server for customers concerned with the cost, difficulty, or security of maintaining Web sites on their own network.
- Customers may choose from a standard hosting service, which places customers' information on a server connected to UUNET's network at 1.5 Mbps, or a premium hosting service, which places their information on a server connected to UUNET's backbone via a 10 Mbps link.
- Customers can receive complete monthly server traffic reports.
- Prices range from \$300 to \$5,400 per month.
- Both UNIX and NT platforms are available.
- A secure transaction feature, FTP site hosting, and a variety of Web site authoring tools are offered.

Other Products and Services

UUNET also provides related products and services that are often required by UUNET's business customers, including the following:

- Hardware, such as network equipment from Cisco and Ascend
- DSU/CSUs and cabling
- Software such as Chameleon from NetManage
- Tutorials such as seminars to educate current and potential customers about Internet access options and applications available from UUNET

- Various consulting services, such as integrating various Internet access services and applications

Clients

As of July 1996, UUNET had more than 25,000 customers in a range of industries. A sample of UUNET customers is shown in Exhibit B.

Marketing and Sales

To date, UUNET has sold its Internet access and applications products and services primarily through its direct telephone sales force.

- Call activity is generated in response to a variety of promotional programs, including advertising in general business and specialty periodicals, participation in industry shows, and press relations.
- In addition, UUNET engages in local promotional programs to support newly opened service locations.
- The sales organization also includes the installation group, which is responsible for support for the first 30 days after installation.

In January 1995, UUNET expanded its sales channels to coincide more closely with the company's enhanced range of products and services and business customer orientation by adding a Major Accounts sales group, a Web Services sales force, and a Channel Development group. Each of these groups focuses on a different segment of the customer base.

- The Major Accounts group focuses on selling products and services to larger businesses with complex Internet needs.

Exhibit B UUNET Clients

Telecommunications AT&T Bell Atlantic Corporation GTE SkyTel Communications Corp. US West On-line & Information Services CompuServe Dow Jones & Co., Inc. EarthLink Network, Inc. GE Information Systems Reuters Holdings PLC Financial Services American Express Co. Chubb Group D.E. Shaw & Co. Morgan Stanley & Co. Inc. Normura Securities International, Inc. Banking Citibank Citicorp Credit Suisse Federal Reserve Bank of New York Swiss Bank Corporation	Computer Software Adobe Systems, Inc. Berkeley Software Design, Inc. Chorus Systems, Inc. Microsoft Trusted Information Systems, Inc. Computer Systems & Services Advantis Digital Equipment Corporation EDS IBM Intel Corp. Manufacturing Angus Chemical Co. Deere & Co. Cummings Engine Co., Inc. Lockheed Martin Corp. LTX Corp. Utilities Boston Edison Co. Electric Power Research Institute Houston Lighting & Power Co. Pacific Power & Light Company Suburban Cablevision	Newspapers Chicago Tribune Co. Gannett Co., Inc. Los Angeles Times New York Times Co. Newhouse Newspaper Metro-Suburbia, Inc. Publishing Addison-Wesley Publishing Co. Condé Nast Publications Inc. Encyclopedia Britannica, Inc. Wiley & Sons, Inc. Time, Inc. Government Federal Reserve Board Occupational Safety & Health Admin. Pacific States Marine Fisheries Commission Social Security Administration United Nations Other Services DHL Worldwide Express Federal Home Loan Mortgage Corp. Kaiser Permanente Pizza Hut Worldwide Student Loan Marketing Assoc.
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Major accounts generally require installations at multiple sites, security and consulting services, comprehensive responses to requests for proposals, and on-site sales and support calls. These accounts generally require more specialized attention than can be provided by a telephone sales representative.

- The Web Services sales force focuses primarily on selling Internet access services in conjunction with UUNET's

Web server hosting services and third-party Web site development services.

- The Channel Development group focuses primarily on developing and maintaining relationships with LAN integrators, vertical solution providers, hardware and software suppliers, and other Internet access providers. UUNET maintains ongoing relationships with a number of industry associations, hardware and software resellers, and marketing

partners. The Channel Development group is also responsible for maintaining relationships with certain of the company's key accounts.

- The Web Services Business Unit, formed in October 1996, is designed to focus solely on the Web server hosting marketplace. The unit is comprised of sales, marketing, and technical resources.

Alliances

In December 1994, UUNET and Microsoft entered into a strategic relationship for the development, operation, and maintenance of a large-scale high-speed dial-up analog and ISDN TCP/IP access network to be the primary Internet dial-up network and infrastructure for Microsoft, including "The Microsoft Network™."

- UUNET and Microsoft entered into a TCP/IP Local Access Network Agreement and a loan agreement under which Microsoft lent to UUNET approximately \$26 million to cover the anticipated capital cost of the network equipment.
- This relationship provided UUNET with the opportunity to accelerate the expansion of the geographic coverage and capacity of its network infrastructure.
- Once a substantial portion of the access network had been deployed, 40% of the access network's dial-up capacity between 6 a.m. and 6 p.m. on business days became available for UUNET to sell to its other customers, leaving 60% available to Microsoft. At other times (nights, weekends and holidays), 15% of the access network's dial-up capacity is available to UUNET and 85% is available to Microsoft.
- Microsoft pays an operating fee equal to the cost of constructing, maintaining, and operating the dial-up network, and pays a management fee regardless of any delay by Microsoft in its use of the network.
- Revenue from the Microsoft Division contributed approximately 20% of UUNET's total revenue in 1995.
- As part of the relationship, Microsoft purchased UUNET stock representing a 13% ownership in UUNET (prior to the MFS merger).
- UUNET has established a separate division to deploy and operate the Microsoft dial-up access network. All division employees are UUNET.

In July 1996, UUNET entered into a multi-million dollar agreement with GTE whereby GTE selected UUNET's dial-up and dedicated network and Internet backbone to offer Internet services nationwide.

- The terms of the agreement were not disclosed.
- GTE is initially offering the service under the name of GTE Internet Solutions in 250 cities in 46 states at a monthly rate of \$19.95 for unlimited dial-up access.

In August 1996, TN Technologies, the digital and interactive marketing company of True North Communications, and UUNET announced an alliance to provide Internet-based digital marketing services.

- This alliance allows TN Technologies to provide its clients with a full range of digital marketing services, including Web site design, deployment, maintenance, and analysis, and on-line programming.

- The companies have also agreed to jointly develop products and services that will be delivered by TN Technologies.

In July 1996, Nielsen Media Research and UUNET entered into an agreement to offer a full range of automated Web site traffic measurement and analysis to UUNET's Web hosting customers via Nielsen's Web site research, measuring, and auditing tools.

In July 1996, NetObjects and UUNET entered into a comarketing agreement for UUNET to provide its Web customers with NetObjects' Fusion through its Web hosting service.

- Fusion, NetObjects' Web site building software product, became generally available in a shrink-wrapped version in September 1996.
- Fusion enables NetObjects' customers to easily host sites with UUNET.

In July 1996, UUNET and USConnect, a leading national systems integrator, announced a collaborative effort to provide customers with end-to-end communication services.

- According to the terms of the agreement, USConnect will resell UUNET Internet services, either under the UUNET label or under a private label, as a part of USConnect's integrated information systems offerings.
- UUNET will use USConnect as a preferred consulting and integration partner, allowing UUNET to offer customers a higher degree of integration between their existing LAN/WAN infrastructure and Internet communication services.

- The companies have also agreed to jointly develop business Internet solutions, such as remote network management, to be marketed by USConnect.

In February 1996, UUNET and USA Networks entered into a partnership agreement to provide the first simultaneous broadcast of entertainment programming over both cable television and the Internet.

Global Village has announced that it will team with UUNET to provide GlobalCenter Internet services, which enable medium-sized companies to purchase a complete Internet solution designed to their specific business needs.

Quarterdeck will incorporate UUNET's access services into its new Quarterdeck Mosaic World Wide Web browser Connect and Play software package.

UUNET has agreements to provide Internet access for the networks of Digital Exchange Inc., EarthLink Network, Inc., Global Village, Inc., and Global Center (Global Village's recent venture).

UUNET also has relationships with a number of on-line services providers and applications developers, including Advantis, CompuServe, FTP Software, Inc., NetManage, Netscape Communications Corporation, Premenos, and Spry.

Competition

UUNET's current and prospective competitors are divided into two groups:

- *Other Internet access providers*—Bolt, Beranek & Newman (BBN), NETCOM On-Line Communications, PSINet, and other national and regional providers

- *Telecommunications companies*—AT&T, MCI, Sprint, Witel, regional Bell operating companies, and various cable companies

Assessment

UUNET's strengths include:

- The highest capacity backbone network within the Internet
- Most experienced engineering staff among Internet service providers
- A unique focus on business use (rather than consumer use) of the Internet

Challenges for the coming year include:

- Growing competition from telephone companies and on-line service providers as they move to the Internet
- Managing growth and expansion to support a rapidly growing high-bandwidth customer base

Parent Company

MFS Communications Company, Inc.
3555 Farnam Street
Suite 200
Omaha, NE 68131
Tel: (402) 977-5300

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

Vanstar Corporation

INPUT
LIBRARY



Chairman & CEO: William Y. Tauscher
President & COO: Jay S. Amato
5964 West Las Positas Boulevard
Pleasanton, CA 94566
Phone: (510) 734-4000
Fax: (510) 734-4802
Internet: [Http://www.vanstar.com](http://www.vanstar.com)

Status:	Public
Employees:	3,500 (11/95)
Revenue, FYE 4/30/95:	\$1,385,392,000
Revenue, 6 mo. ending 10/31/95:	\$872,297,000

Key Points

- Vanstar is a leading provider of services and products designed to build and manage personal computer network infrastructures, primarily for Fortune 1000 companies and other large enterprises. The company has expanded its focus from its traditional PC reselling and service to a full range of outsourcing services, including procurement, management, maintenance, networking, network integration and training.

- In February 1996, Vanstar made an initial public offering of approximately 14.8 million shares of common stock.
- During fiscal 1995 and the first six months of fiscal 1996, Vanstar's operating performance has improved significantly due to increased networking and products revenue, decreased fixed costs as a percent of revenue, cost reduction efforts to consolidate sales administration, and the continuing shift to centralized branches.

Company Description

Vanstar provides products and services that span the life cycle of PC network infrastructure needs. This includes customized, integrated solutions for the

network needs of customers. In addition to software and hardware products from third parties, the company provides design and consulting, deployment, operation and support, and enhancement and migration services.

Formerly ComputerLand Corporation, the company was renamed Vanstar in March 1994, following the sale of ComputerLand's U.S. franchised retail outlets to Merisel. At that time, the company changed its fiscal year end from September 30 to April 30.

In February 1996, Vanstar made an initial public offering of approximately 14.8 million shares of its common stock. Estimated net proceeds to the company of \$85.6 million will be used to repay debt and financing.

Organization and Structure

Vanstar's key executives are listed below.

Vanstar Key Executives

Name	Title
William Y. Tauscher	Chairman & CEO
Jeffrey S. Rubin	Vice Chairman & CFO
Jay S. Amato	President & COO
Richard N. Anderson	SVP Sales
Robert Kuntzendorf	SVP Operations
Chris M. Laney	SVP Networking Services
Daniel S. Maher	SVP Professional Services
Ahmad Manshoury	SVP Product Operations
Michael J. Moore	SVP Management Info. Serv.
Coleman D. Sisson	SVP Learning Network
William R. Waas	SVP Service
Thanos M. Triant	SVP and CTO

Vanstar has changed its operating model from a branch-oriented sales and service organization to a more centralized, tightly controlled systems-based organization.

Vanstar is headquartered in Pleasanton (CA) and has approximately 90 locations nationwide.

Customer support groups are in Pleasanton and Indianapolis (IN).

Configuration and distribution facilities are in Indianapolis and Livermore (CA).

A National Technical Center located in Roswell (GA) provides help desk support.

Company Strategy

Vanstar's service offerings are organized into an integrated model called Life Cycle Management (LCM). Build upon four fundamental principals—a complementary suite of services, automated systems, experienced people and proven processes—this model supports the PC network infrastructure throughout its entire life cycle.

Vanstar's objective is to continue to be a leading provider of a range of PC network infrastructure products and services to large businesses throughout the world. Vanstar has committed to invest approximately \$44 million to support its service offerings.

To achieve its objective, Vanstar believes it must:

- Leverage its broad customer base
- Develop and enhance value-added services
- Expand its worldwide capabilities for multinational customers through alliance partners with worldwide strengths

Financials

Total revenue for the six months ending October 31, 1995 reached \$872.3 million, a 37% increase over \$638.4 million for the same

period in 1994. Net income reached \$8.3 million, compared to \$299,000 for the same period a year ago. A financial summary follows:

Vanstar Corporation Financial Summary (\$ Millions, except per share data)

Item	Six Months Ending 10/30/95	Six Months Ending 10/30/94	Fiscal Year Ending 4/30/95
Revenue	\$872.3	\$638.4	\$1,385.4
Income (loss) before taxes	\$13.1	\$0.5	\$2.1
Net income (loss)	\$8.3	\$0.3	\$1.3
Earnings (loss) per share	\$0.25	N/A	\$0.04

Vanstar has reduced its selling, general, and administrative expenses as a percent of total revenue from 20.1% in fiscal 1992 to 10.7% for the six months ending October 31, 1995 as a result of the following initiatives:

- In the first six months of fiscal 1996 and during fiscal 1995, the company achieved increased networking and products revenue, decreased fixed costs as a percent of revenue, and cost reductions through consolidating sales administration and the continued shift to centralized branches.
- In fiscal 1994, Vanstar began to increase the number of its systems engineers, leading to a significant increase in networking revenue in fiscal 1995.
- The sale of the U.S. franchise business in 1994 provided capital to build product inventories and enhance marketing efforts.
- Vanstar has moved the company from a branch orientation to a more centralized, systems-based business.

Revenue Analysis by Product/Service

Vanstar's four primary sources of revenue are products, networking, support services and other services.

- Product revenue is primarily derived from the sale of computer hardware, software, peripherals and communications devices manufactured by third parties and resold by Vanstar, principally to implement integration projects.
- Networking revenue is primarily derived from value-added services, including services focused on the server and communication segments of the PC network infrastructure. These services include network installation, design and consulting, and enhancement and migration, as well as server deployment and support.
- Support services revenue is primarily derived from services performed for the desktop and focused on the client or user of the PC network. These services include desktop installation, repair and maintenance, moves, adds and changes,

extended warranty, asset management and help desk.

- Other services revenue is primarily derived from fees earned on a distribution services

agreement with Merisel and from training and education services.

A three-year summary of source of revenue follows:

Vanstar Corporation
Three-Year Source of Revenue Summary
 (\$ Millions)

Product/Service	Six Months Ending 10/31/95		Six Months Ending 10/31/94		Fiscal Year Ending 4/30/95	
	Revenue \$	Percent of Total	Revenue \$	Percent of Total	Revenue \$	Percent of Total
Products	\$763.1	87%	\$541.4	85%	\$1,187.4	86%
Services						
- Networking	24.4	3%	13.8	2%	31.8	2%
- Support services	67.5	8%	64.9	10%	131.2	9%
- Other	17.3	2%	18.2	3%	35.0	3%
Total	\$872.3	100%	\$638.3	100%	\$1,385.4	100%

Results for the six months ending October 31, 1995 were attributed to the following:

- Product revenue increased 41% over the prior year's same period. Gross margins increased 34% to \$70.8 million.
- Networking services revenue increased 77%, reflecting the increased customer demand for Vanstar's value-added PC network service offerings. Gross margins increased 82% to \$11.2 million due to increased billing rates and improved use of systems engineers.
- Support services revenue increased 4% over the same period a year ago. Gross margins decreased 10% to \$24.5 million as a result of hiring additional field engineers to support new contracts.

- Other services revenue declined 5% due to a reduced demand for training services. Gross margins decreased slightly to \$14.7 million.

Market Financials

Vanstar's revenue is derived primarily from Fortune 1000 companies in a range of industries, including manufacturing, banking and finance, insurance, telecommunications, software, and utilities.

During the 12 months ending October 31, 1995, Vanstar derived approximately 50% of its revenue from its 50 largest customers.

During the fiscal year ending April 30, 1995, only Microsoft Corporation accounted for more than 10% of Vanstar's total revenue, accounting for approximately \$150 million of total revenue.

Geographic Markets

For fiscal 1995, the majority of Vanstar's revenue was derived from the U.S.

In January 1996, Vanstar announced the first phase of a global customer support program—Global Enterprise Services. The program combines new international business alliances with Groupe Bull and Ingram Micro, together with an expansion of Vanstar's international consulting and project management organization, to provide a single-source solution to U.S.-based multinational corporations.

- Under a new alliance, Vanstar will work with Groupe Bull for installation, maintenance, moves, adds and changes, asset tracking, networking and support services outside the U.S.
- Ingram Micro will provide, initially in Europe, a variety of warehousing delivery and local country customer service functions. Ingram Micro warehouses will also provide local country configuration and fulfillment direct to the user on behalf of Vanstar.
- Vanstar is linking its proprietary automated systems with the service and order management systems of Groupe Bull and Ingram Micro.
- Vanstar is expanding its international project management and consulting organization, has opened new international subsidiaries in Luxembourg and Hong Kong, and opened new offices in Belgium and London. The company plans to expand into other European locations later in 1996.
- Vanstar will initially concentrate on delivering Global Enterprise Services to existing large customers that require a single-source international solution.

Divestitures

In April 1994, Vanstar sold several of its international subsidiaries, which operated franchise businesses primarily in Europe, resulting in a net gain of approximately \$12.6 million.

Effective January 31, 1994 the company sold its U.S. franchise operations as well as the ComputerLand brand name within the U.S. to Merisel, Inc. for \$80.2 million in cash plus additional contingent payments.

- Vanstar recorded a gain on the sale of \$32.5 million.
- The sale provided additional capital that Vanstar used to build product inventories and enhance its marketing efforts to capture a greater portion of the business of its largest customers.
- Concurrent with the sale, Vanstar and Merisel formed a distribution services agreement whereby Vanstar continued to supply products and provide certain logistics and other support services to Merisel. Vanstar receives a monthly distribution fee for these services. In January 1996, the companies extended this agreement through April 30, 1997 for a contingent consideration fee of \$14.6 million.

In June 1993, Vanstar sold its New Zealand subsidiary for approximately \$2.2 million, recognizing a gain of \$0.3 million.

Employees

As of October 31, 1995, Vanstar had approximately 3,500 employees, of which 2,200 were technical employees. These employees include 540 field sales and service representatives and 600 systems engineers.

Key Products and Services

Vanstar combines value-added services with sourcing and distributing products from a variety of vendors to provide network integration solutions.

- These integrated life cycle management solutions are designed to support the PC network infrastructure throughout its life cycle.
- Life cycle management services include network design and consulting, acquisition and deployment, operation and support, and enhancement and migration.
- Vanstar offers each of its services as a discrete service or as part of an integrated life cycle management program. These solutions often involve "managed" or "outsourcing" services.

Design and Consulting Services

Vanstar offers network design and consulting services that address the PC network life cycle.

For network design, the company uses a proprietary five-step methodology to assist customers in selecting, designing, planning and executing a network project—discovery, current state definition, requirements definition, solution design, and implementation planning.

Vanstar employs national consulting teams, such as the Enterprise Communications Consulting Group, with expertise in cabling systems design, hubbing architecture, bridging/routing/switching systems, wide-area transport and network management; and Enterprise Solutions Consulting for Microsoft BackOffice support. Other teams have expertise in process mapping and reengineering for outsourcing the PC life cycle,

asset management and disaster recovery planning.

Deployment Services

These services include product procurement, configuration, distribution, installation, cabling and connectivity.

Vanstar sources PCs, network products, computer peripherals and software to equip the network environment.

- Vanstar provides products from more than 700 vendors, including Compaq, IBM, Hewlett-Packard, Apple, Sun Microsystems, Microsoft, Novell, 3COM and Bay Networks.
- The company is authorized to sell a range of network products, including servers, desktop and mobile systems, bridges, routers, hubs and concentrators, operating systems, applications, groupware and electronic mail products.
- Vanstar provides a single point of contact for customers to place and track all product orders.
- Vanstar customer support groups in Indianapolis (IN) and Pleasanton (CA) provide order management services, from quotation to order processing, order tracking and fulfillment.
- Vanstar has centralized its configuration and distribution facilities in two automated distribution centers in Indianapolis (IN) and Livermore (CA). These facilities handle product receiving, warehousing, central configuration, testing, order handling and shipping.

Operation and Support Services

Vanstar's network operation and support services include moves, adds and changes,

repair and maintenance, help desk, network monitoring, and asset management.

- Vanstar installs additional hardware and software to increase the capacity of or otherwise upgrade existing products and systems.
- Repair and maintenance services include extended warranty services, depot repair, and preventive maintenance. On all products for which Vanstar is authorized to provide warranty coverage, it offers its customers extended warranty service on standard manufacturer configurations and optional components, up to 24 hours per day, 365 days per year, anywhere in the U.S. within 100 miles of any of Vanstar's approximately 90 locations.
- Help desk support is provided through Vanstar's National Technical Center in Roswell (GA). Support is available up to 24 hours per day, 7 days per week. Help desk support is available for all major software applications and operating systems, including network software. Help desk support can also troubleshoot problems for all major hardware products.
- Vanstar's asset management system captures and maintains detailed information regarding a customer's installed base of PC hardware and software assets and generates reports and schedules.

Enhancement and Migration Services

Vanstar provides customization and migration services to assist customers in reducing the cost and disruption of changing technology platforms.

Vanstar's proprietary tools and methods can be used to migrate to new hardware and software platforms. Developed under Horizon—Vanstar's proprietary development

methodology—and managed using Lotus Notes, these toolkits detail the full life cycle processes and procedures for planning and implementing a migration project.

Training and education services include a nationwide network of classrooms and instructor-led or computer-based, self-paced courses at introductory and more advanced levels.

- Topics covered include operating systems, networking electronic mail and personal productivity software.
- Vanstar is a Lotus Authorized Education Center and provides Lotus Notes certification classes for application developers, systems administrators, consultants and specialists.

Automated Systems, Process Methodologies and Technical Personnel

Vanstar has several automated systems to reduce migration costs, enhance service quality and improve reporting. Vanstar uses a number of electronic links, including EDI, to connect customers' systems. Automated systems include the following:

- Vanstar Navigator, a customer interface and order management system that provides information about Vanstar's products
- Cockpit, an order management system used by Vanstar customer representatives to generate quotes and enter and track product orders
- DCMS and FLEX manage the flow of orders through the distribution process and provide on-line information for configuring systems. They are used to operate Vanstar's automated distribution and configuration centers.

- Tracker tracks each package from the warehouse to the customer site.
- NOVA is a proprietary system that manages Vanstar's systems engineering, help desk, dispatch, repair, installation, moves/add/changes and asset management services. NOVA is scheduled for implementation during 1996.

Horizon, Vanstar's proprietary development process, includes a series of toolkits to provide standards and solutions for common network problems and tools for solving unique problems. Lotus Notes is used by Vanstar for electronic delivery of systematized procedures and processes.

Vanstar employs more than 2,200 technical professionals in the U.S., including more than 600 systems engineers. Vanstar is also developing specialized groups of technical

professionals in the areas of operations, methods and practices, process management, and consulting.

- The engineering staff is certified in the major network operating systems and has expertise with LAN and WAN networking products and protocols.
- Vanstar supports major network operating systems, including Microsoft Windows NT and BackOffice, Novell NetWare, IBM LAN Server, and AppleShare.

Clients

Vanstar has a range of customers in various industries.

Customers that purchased products and services in excess of \$1 million during the 12 months ending October 31, 1995 are listed below.

Exhibit

Vanstar Partial Customer List

Customer Name/Industry	Customer Name/Industry
Aluminum Company of America/Manufacturing	Lotus Development Corporation/Software
American Greetings Corporation/Manufacturing	MCI Communications/Telecommunications
Autodesk, Inc./Software	Microsoft Corporation/Software
Avid Technologies, Inc./Software	Mobil Oil Corporation/Oil and Gas
BellSouth Corporation/Telecommunications	Motorola, Inc./High Technology
Charles Schwab and Company/Financial Services	Owens-Corning Fiberglas/Manufacturing
Cigna Corporation/Insurance	Phoenix Newspapers, Inc./Publishing
Duke Power Company/Utility	Praxair Inc./Manufacturing
Federal Express Corporation/Transportation	Sedgwick James, Inc./Insurance
Florida Power & Light Company/Utility	Signet Banking Corp./Financial Services
Ford Motor Company/Manufacturing	Sony Music Entertainment, Inc./Entertainment
Hoechst Celanese Corporation/Chemicals	State of New Jersey/Government
Hoffman-La Roche/Pharmaceuticals	Sybase, Inc./Software
IBM ISSC/Computer Services	The Equitable Companies, Inc./Insurance
IBM/Computers	Union Carbide Corporation/Chemicals
Lehman Brothers Inc./Financial Services	United Technologies/Aerospace; Manufacturing
Liberty Mutual Insurance Group/Insurance	UNUM Corporation/Insurance

In January 1996, Vanstar was awarded a three-year contract worth approximately \$550 million to manage Microsoft's PC procurements, including delivery, setup and installation of both PCs and peripherals.

- The contract applies to approximately 12,500 desktops at Microsoft's domestic sites.
- The agreement calls for a shared-risk pricing model whereby Vanstar can benefit from reducing Microsoft's overall costs.

Marketing and Sales

Vanstar markets its products and services by targeting executives of large enterprises who have information technology decision-making authority.

As of October 31, 1995, Vanstar's domestic sales network included more than 540 field sales and service representatives. Vanstar's direct sales force includes account managers and technical sales personnel.

- Account managers are responsible for prospecting new business, maintaining and expanding relationships with current customers, and ensuring customer satisfaction.
- Technical sales personnel provide the technical expertise to support and supplement the sales effort.

Alliances

In March 1996, Vanstar announced it would resell and support products from CheckPoint Software Technologies, including FireWall-1 for Windows NT, a network security software product. With FireWall-1, Vanstar can design and install a corporate Intranet that is customized to meet any company's security requirements.

In January 1996, Vanstar entered into international alliances with Groupe Bull and Ingram Micro in support of Vanstar's Global Enterprise Services.

In May 1995, Vanstar entered into an agreement with Microsoft whereby Vanstar would hire a substantial number of systems engineers to support Microsoft's BackOffice and Windows NT suite of networking products.

Vanstar is an International Business Partner to IBM and has similar relationships with Hewlett-Packard and IBM.

Vanstar has many subcontracts with prime federal government contractors.

Competition

Major competitors include computer manufacturers and outsourcers entering the personal computer services marketplace, including Digital Equipment Corporation (Multivendor Services), EDS, Hewlett-Packard (Multivendor Services) and IBM ISSC.

Other competitors include VARs, systems integrators and third-party service companies, including AmeriData Technologies, Inc., CompuCom Systems, Inc., DecisionOne, Entex Information Services, InaCom Corp., MicroAge, Inc. and Technology Service Solutions.

INPUT Assessment

Vanstar's strengths include the following:

- Providing a full continuum of managed services (outsourcing) and life cycle management solutions
- The company is in a high-growth market—desktop services—and is one of the leading providers of multivendor PC support services.

- The company has a number of Fortune 1000 companies among its clients, reflecting its ability to provide support on a nationwide basis.
- The company is certified and warranty authorized by many of the leading PC hardware and software vendors.

Challenges include the following:

- Successfully maintaining a cost-effective, centralized operating structuring while continuing to provide quality support to its customers
- Expanding its service offerings outside the U.S. to support multinational customers

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

March 1996

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VeriSign, Inc.

Chairman: Jim Bidzos
President & CEO: Stratton D. Sclavos
2593 Coast Avenue
Mountain View, CA 94043
Phone: (415) 961-7500
Fax: (415) 961-7300
Internet: [Http://www.verisign.com](http://www.verisign.com)



Status:	Private
Employees:	48
Fiscal Year End:	12/31/95

Key Points

- VeriSign, formed in 1995, is the first company established specifically to provide Digital IDs (also known as digital certificates) and related technology.
- Public-key cryptography is an enabling technology for unbreakable security within the Internet and World Wide Web (WWW), electronic commerce, client/server computing, and wireless communications.
- VeriSign's Digital IDs play a key role in ensuring the essential privacy and

authentication capabilities provided by public-key cryptography. A Digital ID binds a person's or company's identity to a digital key that can be used to conduct secure communications or transactions. This binding is accomplished through a strict assurance process conducted by a trusted third party that also electronically signs the Digital ID so that parties accepting it in a transaction have confidence of its origin. The Digital ID can then be attached to electronic transactions and communications as the critical authentication component.

Company Description

VeriSign provides Digital ID products and services for both public and private networks that use public-key cryptography to provide security, privacy and authentication for the electronic commerce marketplace.

VeriSign is a spin-off of RSA Data Security, a leading provider of cryptography solutions.

- In 1989, RSA was contracted by GE Information Services, Chemical Bank and GinnyMae to provide certification services for users in an application that electronically moves mortgage pools. This was the beginning of a Digital ID-related business that became RSA's Certificate Services organization in 1992.
- In June 1995, RSA spun off its Certificate Services organization to form VeriSign, a separate company funded by a group of investors that include RSA, Ameritech, Bessemer Venture Partners, Fischer International, Mitsubishi, Security Dynamics and Visa International.
- VeriSign is now working with its investors and partners to open the digital marketplace to all markets.

Organization and Structure

Jim Bidzos, president and founder of RSA Data Security, is VeriSign's chairman of the board. VeriSign's key officers are listed below:

VeriSign Key Officers

Name	Title
Jim Bidzos	Chairman
Stratton D. Scavos	President & CEO
Michael S. Baum	VP Practices and External Affairs
George J. Ziemba	VP Sales and Business Development

VeriSign has offices in Mountain View (CA) and Tokyo (Japan).

Company Strategy

VeriSign's goal is to provide consumers, merchants and corporations with the confidence necessary to conduct electronic commerce worldwide.

Elements of the company's strategy include:

- One hundred percent focus on digital authentication products and services
- Working with partners to enable applications with digital signature capabilities

Financials

It is anticipated that revenue during 1996 (the company's first full year of operations) will exceed \$3 million.

Industry Markets

Any product or service that can benefit from privacy and/or authentication of messages, content, users, or providers is a potential market for Digital IDs, including:

- Internet, WWW and on-line services
- Electronic commerce, including EDI
- E-mail and groupware/collaborative computing
- Client/server application development

Geographic Markets

VeriSign's products and services are available in the U.S. and many international markets.

Employees

VeriSign currently has 48 employees.

Key Products and Services

VeriSign's services and products are divided into three lines of business—Public Certificate Services (also known as Digital ID Services), Private-Label Certificate Services and Certificate Management Products.

Digital IDs from VeriSign conform to the international standard for digital certificates, assuring interoperability with other products and services that support the standard.

- VeriSign Digital IDs also support the leading standard for certificate-based privacy and authentication systems—the Public Key Cryptography Standard (PKCS).
- PKSC, established in 1991 by RSA and several leading corporations and educational institutions, provides application designers with a common framework for building secure, interoperable, platform-independent, certificate-based applications.

Public Certificate (Digital ID) Services

VeriSign issues and manages Digital IDs to support users of a range of electronic commerce solutions. Public Digital IDs can be issued to individuals for use with WWW client software, secure E-mail packages and other user applications. VeriSign works with application developers, service providers and VeriSign Affiliates to enable certificate use within their products.

VeriSign is a full-service provider of Digital IDs directly to users and a provider of products and enabling technology to other companies that want to issue Digital IDs. VeriSign provides issuing, revocation, and status services for two types of Digital IDs:

- Corporate Digital IDs are used to facilitate intercompany communication that benefits from having the company's name on the

Digital ID of employees and other affiliates of each company.

- Personal Digital IDs are used by individuals who do not need company affiliation and sponsorship in order to conduct their company or personal business.

VeriSign has three primary issuing arrangements to deliver Digital IDs to users of Digital ID-enabled applications, products and services. Issuer options include:

- VeriSign—Digital IDs are issued directly by VeriSign to individuals without corporate sponsorship or to employees and other affiliates of companies or organizations that want to outsource the actual issuing and management of Digital IDs to VeriSign.
- Customer—Digital IDs are issued by companies to their own employees and affiliates using the necessary secure hardware provided by VeriSign.
- Reseller—Digital IDs are issued by companies authorized by VeriSign to provide Digital IDs and related services. VeriSign is actively encouraging reseller relationships to satisfy the Digital ID requirements of specific vertical markets, complex distribution channels and remote geographies.

To integrate Digital IDs within a product or service, the first step is to license public-key cryptography from RSA Data Security or an authorized OEM licensee. Once the public key associated with one or more of VeriSign's Digital ID hierarchies is included with the software distributed to users, these users are ready to be issued Digital IDs by VeriSign or one of its certification partners.

VeriSign issues and manages several classes of Digital IDs, differentiated by the level of

assurance or trust associated with the Digital ID. The assurance level depends on the degree of rigor or due diligence VeriSign applies to establishing a binding between an individual or entity and his/her/its' public key. The registration process for all classes of Digital IDs is completed on-line to ensure a fast response.

- Class 1 Digital IDs ensure uniqueness of name or E-mail address only. Class 1 Digital IDs might support casual WWW browsing and E-mail.
- Class 2 Digital IDs provide a higher level of assurance regarding a person's identity by involving third-party verification of the name, address, and other personal information provided in the registration process. Class 2 Digital IDs might support intra-company E-mail, on-line purchasing from electronic malls, and on-line subscriptions.
- Class 3 Digital IDs provide yet a higher level of identity assurance by involving personal presence or registered credentials. Class 3 Digital IDs might support transactions demanding a higher level of assurance of the identity of individuals. Typical applications might include inter-company E-mail, electronic banking, higher-value purchases from electronic malls, and membership-based on-line subscription and information services.
- Class 4 Digital IDs involve personal presence plus a more thorough investigation of the individual and/or the organization they represent.

VeriSign Server/Entity Digital ID Services—VeriSign also issues Digital IDs for entities.

- Many of the leading SSL- and S-HTTP-based WWW servers (e.g., Netscape, Open Market, and IBM) use VeriSign Digital IDs to provide trust in the server's public key. The public key is instrumental in providing the secure link between client and server necessary to exchange credit card numbers and other sensitive information.
- VeriSign currently offers a Class 3 Digital ID for electronic commerce servers. Proof of right to use the requested name for the server must be provided in the form of a letter from an authorized company representative and Articles of Incorporation or other registered company formation documents.

On-line Certificate Services—VeriSign provides Digital ID directory and revocation list services via the WWW and E-mail to facilitate obtaining other people's Digital IDs and verifying the validity of Digital IDs and digital signatures.

In September 1995, VeriSign announced the World Wide Web's first Online Digital ID Issuing Service™. Being released in conjunction with Netscape Navigator 2.10, this service allows users to enroll directly and receive their own unique Digital IDs.

Private-Label Certificate Services

VeriSign also designs, builds and manages private-label certificate management solutions for service providers or corporations with high-volume enrollment, management, or authorization requirements.

Private-label certificates are restricted use certificates. They are suitable for conveying information about authorization, permissions, and access rights, as well as the basic identification information contained in VeriSign's public Digital IDs.

Within this line of business, VeriSign is able to support customer-specific authorization requirements, while still providing outsourcing of the actual operation associated with issuing the private-label certificates.

For example, VeriSign could work closely with a financial services organization interested in providing Internet services for its customers. VeriSign would design, build and operate a branded solution that allows the organization's customers to request and receive custom certificates, which could be used to authorize activities such as funds transfer or product purchases.

Clients of VeriSign's private-label services include the following:

- VeriSign is issuing Digital IDs to Cisco Systems' employees using Apple's MacOS 7.5 and a forms package from Shana Corporation for a variety of human resources applications.
- VeriSign has provided an on-site Digital ID issuing capability to TRW in support of several productivity pilot programs using digital signatures.
- VeriSign issued the Digital ID that enables Virtual Vineyards to securely accept credit card payments as part of its business of selling wines over the Internet using Netscape's Commerce Server.

Certificate Management Products

VeriSign also builds WWW-based products for both the enterprise and high-volume commercial certificate products.

The new certificate management products will incorporate architectural advances, including customizable enrollment templates, flexible certificate-signing modules, and multisource authorization capabilities.

The products address the four main aspects of certificate management—enrollment, rollover or renewal, revocation, and compromise.

The certificate management series will be available in early 1996 and will include:

- An entry-level system for moderately sized organizations creating private-label certificates or brand-name public certificates. This is a turnkey system for organizations such as businesses, educational institutions and government agencies that issue certificates to members or employees only.
- A high-end system for very large organizations creating a large volume of private-label or brand-name public certificates. Included in this system are customizable management tools for handling the large volume and usage monitoring that a larger certification authority needs.

Marketing and Sales

VeriSign sells its products and services through a direct sales force and through select systems integrators.

Alliances/Partnerships

Vendors that have added VeriSign's Digital IDs to their software products/services include the following:

- Apple Computer (DigiSign digital signature utility)
- Netscape (Netscape Commerce Server, Navigator 2.0)
- Open Market (Secure WebServer)
- Microsoft (Internet Information Server)
- Oracle (Web Server 2.0)

- IBM (WebExplorer Browser and Internet Connection Secure Server for AIX and OS/2)
- CompuServe (Internet Office Web Server)
- O'Reilly and Associates (WebSite Professional)
- StarNine Technologies (WebSTAR SSL Security Tool Kit)
- CyberCash (CyberCash Wallet)

Other industry leaders, including America Online, CyberCash, Dun & Bradstreet, GE Information Services, Intel, Lotus, National Semiconductor, Premenos and Sun Microsystems, have announced their support of VeriSign's efforts to make Digital IDs widely available.

Competition

VeriSign's primary competitor is the U.S. Postal Service.

Assessment

VeriSign's strengths include the following:

- It is the only company 100% focused on digital authentication products and services.
- An infrastructure exists to support large-scale deployments (in the millions).
- The company is setting *de facto* standards.

The key challenge for VeriSign is educating the market.

COMPANY PROFILE

VMARK SOFTWARE, INC.

30 Speen Street
Framingham, MA 01701
(508) 655-3700

James J. Capeless, President and CEO
Public Corporation
Total Employees: 81
Total Revenue, Fiscal Year End
12/31/91: \$12,375,000

The Company

VMARK Software, Inc., founded in 1984, develops, markets, and supports systems software for the development and execution of commercial applications for the UNIX operating system.

- VMARK's principal product, uniVerse, permits existing business applications, originally developed for the Pick operating environment, to run on substantially all major UNIX-based hardware systems.
- VMARK's strategy is to provide cost-effective and comprehensive software for developing and executing business applications marketed primarily by VARs to small and medium-sized businesses and to departments of large corporations. The company's development goals are to continue to improve the utility of uniVerse by enhancing its capabilities and to develop complementary products.

In March 1992, VMARK issued a preliminary prospectus in anticipation of an initial public offering of 1.8 million shares of common stock, of which 1.2 million are to be sold by the company and 0.6 million by selling stockholders. Estimated net proceeds to VMARK of \$11.8 million are to be used for corporate purposes.

VMARK's 1991 revenue reached \$12.4 million, an 82% increase over 1990 revenue of \$6.8 million. Net income rose 205%, from \$0.9 million in 1990 to over \$2.7 million in 1991. A five-year financial summary follows:

VMARK SOFTWARE, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ thousands, except per share data)

ITEM	FISCAL YEAR				
	1991	1990	1989	1988	1987
Revenue	\$12,375	\$6,796	\$4,321	\$3,619	\$2,863
· Percent change from previous year	82%	57%	19%	26%	N/A
Income (loss) before taxes	\$3,087	\$1,001	\$298	\$(1,640)	\$(1,769)
· Percent change from previous year	308%	236%	118%	7%	N/A
Net income (loss) (a)	\$2,727	\$895	\$265	\$(1,640)	\$(1,769)
· Percent change from previous year	205%	238%	116%	7%	N/A
Earnings (loss) per share	\$0.52	\$0.18	\$0.05	\$(0.34)	\$(0.43)
· Percent change from previous year	189%	360%	115%	21%	N/A

(a) Includes utilization of tax benefit carryforward of \$1.0 million, \$315,000, and \$92,000 in 1991, 1990, and 1989, respectively.

Revenue increases in 1991 were attributed to the increase in the number of uniVerse licenses sold and, to a lesser extent, to a 16% price increase for uniVerse licenses in April 1991 and increased revenue from training and maintenance services.

- During 1991, VMARK expanded its sales and marketing efforts, including the establishment of a European subsidiary with sales and support offices in England and France, and an Asia-Pacific subsidiary with a sales and support office in Australia.
- In addition, VMARK increased the number of its worldwide resellers from approximately 135 in 1990 to 160 in 1991.
- From 1986 to April 1991, VMARK paid royalties, based on the number of licensed uniVerse users, to a third party with respect to certain technology incorporated in uniVerse. In April 1991, VMARK entered into an agreement granting it a perpetual, non-exclusive, royalty-free license to the technology for a fixed price payable in installments. This agreement has significantly reduced the company's cost for software.
- Prior to 1988, VMARK sold both hardware and related computer hardware. In mid-1988, the company ceased its sales of hardware and focused on being solely a provider of software

and related services. As a result, certain costs and expenses were significantly reduced.

Research and development expenses were approximately \$1.7 million (14% of revenue) in 1991, \$1.2 million (18% of revenue) in 1990, and \$930,000 (22% of revenue) in 1989.

As of December 31, 1991, VMARK had 81 employees, segmented as follows:

Sales/marketing	31
Engineering and support	35
Management, administration, and finance	<u>15</u>
	81

Key Products and Services

Approximately 58% of VMARK's 1991 revenue was derived from systems software product licenses and 42% from associated support services. A three-year source of revenue summary follows:

VMARK SOFTWARE, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ thousands)

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Software	\$9,737	58%	\$5,100	75%	\$2,486	79%
Services	2,638	42%	1,696	25%	1,835	21%
TOTAL	\$12,375	100%	\$6,796	100%	\$4,321	100%

UniVerse is an application development and execution software product that combines the features of the Pick and UNIX systems.

- UniVerse permits existing business applications, originally developed for the Pick environment to run on substantially all major UNIX-based hardware systems. UniVerse replaces the Pick proprietary hardware monitor with the UNIX operation system, providing access to standard UNIX features. UniVerse also replaces the Pick applications environment with a native UNIX shell written in the C language.

- The product also includes an application development language and programming support tools to develop new applications for UNIX.
- Currently more than 600 business applications are offered with uniVerse on more than 70 UNIX hardware platforms. UniVerse is also compatible with various Pick-based systems.
- UniVerse is priced on the basis of the number of users. The domestic list price is \$435 per user for licenses of 4 to 63 users, and \$365 per user for licenses of 64 or more users. Internationally, the per-user list prices are \$600 and \$510, respectively.
- VMARK has sold more than 6,500 uniVerse licenses and has over 170,000 users.

UVnet permits transparent access to data that may be distributed over single or multiple vendor systems running uniVerse. In addition, uVnet enables the developer to create distributed processing applications for LANs using TCP/IP. The list price for a uVnet license, for an unlimited number of users, is \$2,000 per system on a network.

Products under development include the following:

- Outlook will provide a PC look-and-feel for screen design and data entry and update. The product is intended for casual users who wish to develop and execute simple applications.
- Newlook will provide application developers with a tool kit to create graphical user interfaces for new and existing business applications. The product is being jointly developed with Siemens-Nixdorf.
- X/uniVerse is intended primarily for use by applications developers to provide graphical interfaces for X terminals. The product is being jointly developed with Siemens-Nixdorf.

Support services provided by VMARK include the following:

- VMARK provides pre- and post-installation on-site assistance and telephone support by product specialists.
- Maintenance, consulting, and training courses are available for a separate fee at VMARK locations and client sites.

- All maintenance customers have access to VMARK's Interactive Support Advisory System, an on-line facility providing information on releases, revisions, enhancements, and other product matters.
- The annual charge for maintenance provided directly to end users is generally equal to 12% of the end-user list price of a license.
- VMARK also provides backup maintenance service through certain resellers that provide first-line maintenance.

Industry Markets

VMARK's products are available to clients across industries. The company has customers in many industries, including distribution, financial services, energy, legal, education, health care, and manufacturing, as well as various government agencies.

VMARK sells its products worldwide through approximately 160 resellers, including 145 VARs (that combine uniVerse with their software applications) and 12 hardware vendors and, in certain instances, directly to large end users.

- One of VMARK's VARs, the Ultimate Corp., accounted for 19%, 21%, and 15% of VMARK's total revenues in 1991, 1990, and 1989, respectively.
- Reynolds & Reynolds accounted for 8%, 14%, and 13% of VMARK's total revenues in 1991, 1990, and 1989, respectively.

Geographic Markets

Approximately 78% of VMARK's 1991 revenue was derived from the U.S. and 22% from international sources.

A three-year geographic source of revenue is estimated as follows:

VMARK SOFTWARE, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)

ITEM	FISCAL YEAR					
	1991		1990		1989	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$9.7	78%	\$5.9	87%	\$3.2	75%
International	2.7	22%	0.9	13%	1.1	25%
TOTAL	\$12.4	100%	\$6.8	100%	\$4.3	100%

In the U.S., sales and support personnel are located in Framingham (MA), Dallas (TX), and two locations in Orange County (CA).

VMARK's U.K. subsidiary, VMARK Europe, has office in England and France that support resellers of VMARK's products in the U.K., France, Finland, Germany, Ireland, Portugal, South Africa, Spain, Sweden, and Switzerland.

VMARK's Australian subsidiary, VMark Asia Pacific, based in Sydney, supports resellers in Australia, New Zealand, Indonesia, Malaysia, and Hong Kong.

VMARK also has distributors in Argentina, Brazil, Canada, and Columbia.

**WALKER INTERACTIVE SYSTEMS,
INC.**

Marathon Plaza Three North
303 Second Street
San Francisco, CA 94107
Phone: (415) 495-8811
Fax: (415) 957-1711

Chairman, President, & CEO:	David W. Brownlee
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	500
Total Revenue:	\$62,855,000
Fiscal Year End:	12/31/92

Key Points

- Walker has established itself as a potential leader in the emerging client/server applications market by releasing a graphical user interface product and announcing plans to deliver UNIX server versions of all its applications during 1994, in addition to personal client applications for use with both mainframe and UNIX server versions.
- Walker has announced Project Cost Management System, a new product scheduled for availability during the third quarter of 1993.

INPUT LIBRARY

**Company
Description**

Walker Interactive Systems, Inc., founded in 1973, designs, develops, markets, and supports mainframe-based financial and control applications software products for large organizations. The company also provides consulting, implementation, and training services to its software clients.

- During 1987, Walker introduced one of the first commercially available financial and control applications software products for IBM's DB2 relational data base management system. In 1991, products for the DB2 environment accounted for approximately 80% of Walker's license fee revenues.
- In September 1990, Walker acquired the Credit and Accounts Receivable Management System (CARMS) from Global Software, Inc. for a total purchase price of nearly \$7.2 million.

In April 1992, Walker completed an initial public offering in the U.S. of 3.0 million shares of its common stock, of which 2.0 million shares were sold by the company and 1.0 million were sold by stockholders. Net proceeds to the company of \$27.2 million will be used as working capital.

Strategy

Walker's strategy is to enhance its leadership position in the financial and control applications software market for large organizations with complex needs by:

- Exploiting its layered product architecture
- Leveraging new technologies
- Providing customer-driven product functionality
- Building strategic relationships
- Ensuring customer satisfaction
- Broadening its customer base
- Expanding its sales organization

Walker's current products have built-in portability and are available for 14 different IBM mainframe environments supporting a range of data base management systems, operating systems, and user interfaces.

Walker's client/server implementation will expand the existing portability of its mainframe products and will support multiple processing platforms, servers, GUIs (including Windows, Macintosh, Presentation Manager, Motif, and Open Look), development languages (C and SQL), network protocols (SNA and TCP/IP), and operating systems (OS/2, UNIX, and MVS).

- The company will offer a single set of products, portable across platforms, with all the functionally required of Walker's current clients--high system availability, fault tolerance, and high volume transaction processing. Clients will choose which operating platform to run their applications, based on their business requirements.
- Walker's initial client/server release, scheduled for the second quarter of 1994, will provide support for all Walker products operating on the UNIX platform.

Financials

Walker's 1992 revenue reached \$62.9 million, a 41% increase over 1991 revenue of \$44.7 million. Net income rose 206%, from \$3.5 million in 1991 to \$10.7 million in 1992. A five-year financial summary follows:

**WALKER INTERACTIVE SYSTEMS, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	1992	1991	1990	1989	1988
Revenue	\$62.9	\$44.7	\$28.5	\$19.7	\$13.6
• Percent increase from previous year	41%	57%	45%	45%	19%
Income before taxes	\$11.9	\$4.5	\$1.4	\$1.0	\$1.2
• Percent increase (decrease) from previous year	164%	221%	40%	(17%)	(20%)
Net income	\$10.7	\$3.5	\$1.0	\$0.7	\$1.2
• Percent increase (decrease) from previous year	206%	250%	43%	(42%)	(25%)
Earnings per share	\$0.86	\$0.32	\$0.09	\$0.06	\$0.20
• Percent increase (decrease) from previous year	169%	256%	50%	(70%)	(50%)

Walker management attributes 1992 results to the following:

- License fees increased by 30% to \$22.1 million due to the expansion of Walker's marketing and sales efforts, the second full year of sales in 1992 of three new products released during 1990, greater market acceptance of the company's products and, to a lesser extent, price increases that have averaged 10% annually since 1989. The company's sales organization increased from 49 at the end of 1990 to 78 at the end of 1992.

- Maintenance revenue increased by 37% to \$20.6 million due to the increase in the installed customer base, the inclusion of CARMS for the full year, the growth in revenue from licenses (a portion of which is allocated to maintenance) and, to a lesser extent, price increases.
- Consulting and other services increased by 60% to \$20.1 million due to increased hiring of personnel to provide consulting services to meet the demand for customization, implementation, and training, which had previously been provided by customers' staffs or third-party consulting firms. The professional services organization increased from 72 employees at the end of 1990 to 142 at the end of 1992.
- International operations, primarily in the U.K. increased by 40% to \$13.0 million during 1992.
 - License fees from international operations increased by 85% to \$5.0 million in 1992 influenced significantly by a large, single sale in the U.K. during the third quarter.
 - International maintenance revenue increased by 29% to \$4.0 million primarily due to the larger installed customer base, principally in the U.K.
 - International consulting and other revenue increased by 14% to \$4.0 million due primarily to an increase in consulting personnel and expanded marketing efforts.
 - Operating income (or loss) from international operations, primarily in the U.K., was \$0.1 million, \$(0.2) million, and \$0.1 million for 1992, 1991, and 1990, respectively.

Research and development expenses, including software costs capitalized, were approximately \$13.9 million, \$11.0 million, and \$8.4 million for 1992, 1991, and 1990, respectively.

Revenue for the three months ending March 31, 1993 reached \$15.1 million, a 23% increase over \$12.3 million for the same period in 1992. Net income rose 78%, from \$600,000 to nearly \$1.1 million.

Alliances

Walker has alliances/marketing agreements with various vendors including IBM, Hewlett-Packard, Sybase, Visix, and FileNet.

Employees

As of December 31, 1992, Walker had 468 employees, of which 349 were based in the U.S. and 119 were based internationally. The company's employees were segmented as follows:

Marketing and sales	96
Customer support	49
Professional services	142
Research, product development, and engineering	125
Data processing, administration, and finance	<u>56</u>
	468

Walker currently has approximately 500 employees.

Competitors

Walker's primary competitors are Dun & Bradstreet Software, SAP America, Oracle, and PeopleSoft.

Key Products and Services

Approximately 35% of Walker's 1992 revenue was derived from software license fees, 33% from software maintenance services, and the remaining 32% from consulting and education services. A three-year summary of source of revenue follows:

**WALKER INTERACTIVE SYSTEMS, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	1992		1991		1990	
License fees	\$22.1	35%	\$17.0	38%	\$13.7	48%
Maintenance	20.6	33%	15.1	34%	9.2	32%
Consulting and other	20.1	32%	12.6	28%	5.6	20%
TOTAL	\$62.8	100%	\$44.7	100%	\$28.5	100%

Software Products:

Walker's product line currently consists of seven applications software products and an extended set of customization and productivity tools for IBM and compatible mainframes, using primarily DB2 and IMS/DB data base management systems and IMS/DC and CICS data communications systems.

- The products are based on a layered software architecture, with productivity tools allowing Walker's applications to be easily customized to fit the customer's particular business processes.
- The applications provide a simplified migration path to new computing environments through the replacement of modular components or layers and incorporate cooperative processing capabilities.

Walkers' products include the following:

- Management, Budgeting & Accounting (MBA) is an integrated general ledger system that combines financial and management accounting and analysis with full budgeting capabilities. Sales of MBA contributed 33%, 39%, and 33% to Walker's license fees for 1992, 1991, and 1990, respectively.
- The Credit & Accounts Receivable Management System (CARMS) allows customers to manage credit and accounts receivable operations.
- Accounts Payable Management manages invoice processing and cash management and is built to handle multiple currencies.
- Purchase Order Management automates the purchase order process from requisition through receiving.
- Inventory Management tracks inventory by physical location, quantity, price, and description and can be used to manage multiple warehouses and multiple locations.
- Asset Management manages physical asset inventory and performs asset-related financial accounting, reporting, budgeting, and forecasting.
- Project Cost Management provides operational views for controlling the costs of ongoing projects, and allows users to initiate projects, define their structure and associated spending plans, as well as manage and monitor progress, resource utilization, and spending through the project life cycle.

Walker also offers a set of customization and productivity tools that are delivered with each of its applications products. In addition, an extended toolset and the rights to use it for more extensive system modifications and enhancements is available under a separate Application Extension License.

Walker's applications range in price from \$100,000 to \$500,000, depending on the product functionality and technical environment.

Maintenance and Support Services:

The first year of maintenance is included in the initial license fee. Thereafter, customers can and typically do renew their maintenance contracts.

Services include:

- 24-hour hotline telephone support for problem determination and resolution
- Account management and guidance through dedicated regional support teams for specific geographic areas
- Ongoing functional and technical enhancements for installed products
- Membership in Walker's users group

The price of maintenance contracts covering Walker's software products are calculated as a percentage, typically 15%, of the related product's current license fee. Walker has historically experienced an annual renewal rate over 90% for its maintenance contracts.

During 1992, Walker opened The Walker Store in IBM's Software Mall providing customers with on-line access to information about Walker's products and services.

Professional Services:

Walker's Professional Services Division, with 142 employees, assists customers in planning and managing implementation of Walker products and provides services in project planning, project management, requirements specification, design, programming, testing, and conversion.

Walker offers over 30 courses to its customers each year at either the customer's site or at one of Walker's four training facilities in San Francisco, Chicago, Boston, or London. Topics range from basic and advanced courses on applications and personalizing tools, to technical courses on systems architecture.

A Cooperative Processing Group specializes in the integration of desktop and workgroup technology with Walker financial and control software applications.

- The group's current services include implementation of multimedia-based training systems and assistance in the development of electronic documentation systems, paperless distribution systems for financial reporting and analysis, and executive information systems.
- Walker has introduced Walker Interactive Training, a multimedia system for self-paced instruction in Walker's products and technologies.

Industry Markets

Walker markets its products primarily to large or complex organizations with intensive data processing and information management requirements.

Clients

Walker has over 500 customers in a wide variety of industries. Customers include Bank of America, Chevron Overseas Petroleum, American Airlines, Deere & Company, Delta Air Lines, Shell Oil, Carolina Power & Light, Martin Marietta, Southern Company Services, University of California (Los Angeles), Upjohn, and Reynolds Metals.

Geographic Markets

Approximately 79% of Walker's 1992 revenue was derived from North America and 21% from international sources, primarily the U.K. A three-year geographic source of revenue summary follows:

**WALKER INTERACTIVE SYSTEMS, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	1992		1991		1990	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
North America	\$49.8	79%	\$35.4	79%	\$20.3	71%
International	13.0	21%	9.3	21%	8.2	29%
TOTAL	\$62.8	100%	\$44.7	100%	\$28.5	100%

Walker's North American headquarters and support offices are in San Francisco, with regional offices located in Boston, Chicago, and Washington, D.C.

Internationally, sales, support, and professional services are offered through offices in London (U.K.) and Sydney (Australia).

COMPANY PROFILE

INPUT[®]

WARNER INSURANCE SERVICES, INC.

17-01 Pollitt Drive
Fair Lawn, NJ 07410
Phone: (201) 794-4800
Fax: (201) 791-9113

Chairman & President: Harvey Krieger
Status: Public Corporation
Stock Exchange: NYSE
Total Employees: 511
Total Revenue: \$90,544,801
Fiscal Year End: 10/31/92

Key Points

- Warner's work for the Market Transition Facility of New Jersey (MTF), formerly the New Jersey Automobile Full Insurance Underwriting Association (JUA) is in its third and final year (the State of New Jersey has discontinued providing auto insurance through the MTF). Revenue and expenses during fiscal 1993 will decrease significantly as policies being serviced under the contract will wind down to zero on September 30, 1993. JUA/MTF-related activities, including subcontracted claims servicing, contributed 75%, 81%, and 60% to Warner's fiscal 1992, 1991, and 1990 revenue, respectively.
- Warner is working with Clarendon National Insurance company to "buy out" assigned risk assignments from several insurance companies not interested in offering insurance under New Jersey's new Assigned Risk Program. Policy and claims processing services provided by Warner to Clarendon under this program are expected to generate annual service fees to Warner of about \$10 million.
- During fiscal 1992, Warner sold its financial data base business because it did not fit within Warner's strategic focus of serving the auto insurance industry.
- Strong results for the first quarter of fiscal 1993 indicate that Warner has passed the turning point in which its revenue from newer contracts with insurance companies serving the voluntary and assigned risk auto insurance markets in New Jersey are growing at a rapid rate, far faster than the decline in revenue from older programs such as the MTF.

**Company
Description**

Warner Insurance Services (formerly Warner Computer Systems), founded in 1971, provides a range of processing services to the automobile insurance industry that permit Warner's insurance customers to outsource part of or all their policy/claims administration. Warner also provides microcomputer-based policy issuance software to the insurance industry.

- Automobile insurance services, which contributed 50% to Warner's fiscal 1992 revenue, consist of underwriting, rate pursuit, policy issuance, accounting, customer service, claims settlement, and policy processing. For fiscal 1992, approximately 54% of insurance services revenue was derived from Warner acting as a third-party administrator of insurance policies for the Market Transition Facility of New Jersey (MTF), formerly the New Jersey Automobile Full Insurance Underwriting Association (JUA).
- Warner also subcontracts certain claims services related to the contract with the JUA/MTF to Material Damage Adjustment Corporation, an independent third-party contractor. Pass-through revenue related to these subtracted services was 46% of Warner's fiscal 1992 revenues.
- Warner's Cover-All Systems, Inc. subsidiary, based in Fair Lawn (NJ), provides microcomputer-based policy insurance software to the insurance industry. Revenues from this unit were 2% of Warner's fiscal 1992 revenue.
- Warner also derived approximately 2% of its fiscal 1992 revenue from on-line financial data base services provided through its Warner Information Technologies, Inc. subsidiary. These operations were sold during the third quarter of fiscal 1992.
- Premium Inquiry Services, Inc. of Morganville (NJ), acquired by Warner in 1989, provides a range of policy verification services to Warner's JUA and MTF operations, and to another MTF servicing carrier. These operations have been phased out due to the ending of the MTF contract.

Through December 1990, Warner also provided microcomputer sales and hardware maintenance services through its Microcorp subsidiary. These operations were discontinued by the company due to sales and margin problems.

Effective March 1992, the company changed its name to Warner Insurance Services in order to link the identification of the company with its primary services.

Financials

Fiscal 1992 revenue reached \$90.5 million, a 65% increase over fiscal 1991 revenue of \$54.8 million. Net income rose 98%, from \$1.7 million in fiscal 1991 to \$3.3 million in fiscal 1992. A five-year financial summary follows:

**WARNER INSURANCE SERVICES, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	10/92	10/91	10/90	10/89	10/88
Revenue	\$90.5	\$54.8	\$46.2	\$26.6	\$22.1
• Percent increase from previous year	65%	19%	74%	20%	8%
Income (loss) before taxes	\$5.7	\$2.9	\$(0.4)	\$2.3	\$3.1
• Percent increase (decrease) from previous year	97%	825%	(a)	(a)	(29%)
Net income (loss)	\$3.3	\$1.7	\$(0.2)	\$1.3	\$2.4
• Percent increase (decrease) from previous year	98%	950%	(117%)	(45%)	7%
Earnings (loss) per share	\$0.45	\$0.24	\$(0.03)	\$0.20	\$0.39
• Percent increase (decrease) from previous year	88%	900%	(115%)	(49%)	8%

(a) Includes restructuring charges of \$2.2 million (\$0.19 per share) and \$1.0 million (\$0.09 per share) for fiscal 1990 and 1989, respectively, related to discontinuing the operations of Microcorp.

Warner management attributes revenue increases during fiscal 1992 to a 59% increase in insurance services revenue, and a 73% increase in subcontracted claims servicing revenue.

- Insurance services revenue increased as a result of growth in the full service business, including the servicing of the full-service contract with Atlantic Employers Insurance Company and Pacific Employers Insurance Company, which began in July 1991. As of October 31, 1992, approximately 40,000 policies were being serviced under this contract.
- Revenue in the full-service business, which also includes various assigned risk and depopulation contracts, accounted for approximately 24% of insurance services revenue in fiscal 1992 as compared to 5% in fiscal 1991.

- Higher insurance services revenue also reflects the increases in the volume and fees associated with policies serviced under the contract with the MTF.
- Subcontracted claims servicing revenue represents fees that are remitted to the subcontractor with no profit markup and are derived entirely from activities associated with the MTF.

Revenue for the three months ending January 31, 1993 reached \$21.2 million, a 9% increase over \$19.4 million for the same period in 1992. Net income was over \$1.0 million, a 64% increase over \$638,187 for the same period a year ago.

Acquisitions/ Divestitures

In the third quarter of fiscal 1992, Warner sold its financial data base business, Warner Information Technologies, to Track Data Corporation of New York (NY) for cash and notes aggregating about \$1.5 million.

Employees

As of October 31, 1992, Warner had 511 employees (generating revenue of \$177,191 per employee). The company currently has 540 employees, segmented as follows:

Employee Category	Number of Employees	Percent of Total
Policy issuance	205	38%
Claims	85	16%
Cover-All Systems	30	5%
Insurance services	80	15%
MIS	110	20%
Administration	30	6%
Total	540	100%

Competitors

Competitors in the insurance processing area include Electronic Data Systems, Policy Management Systems, Computer Sciences Corporation, The Robert Plan Corporation, and ISI Systems.

Key Products and Services

Approximately 50% of Warner's fiscal 1992 revenue was derived from insurance services (systems operations) provided directly by Warner, 46% from subcontracted claims servicing, 2% from electronic information services (data base services); and 2% from microcomputer-based software products.

A three-year source of revenue summary follows:

**WARNER INSURANCE SERVICES, INC.
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

	FISCAL YEAR					
	10/92		10/91		10/90	
ITEM	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Insurance services (systems operations)	\$44.8	50%	\$26.8	49%	\$19.6	42%
Subcontracted services	41.9	46%	24.3	44%	13.7	30%
Data base services (a)	2.0	2%	2.6	5%	2.4	5%
Software products	1.8	2%	1.1	2%	1.0	2%
Microcorp (b)	--	--	--	--	9.5	21%
TOTAL	\$90.5	100%	\$54.8	100%	\$46.2	100%

(a) These operations were sold during fiscal 1992.

(b) These operations were discontinued in December 1990.

Full-Service Automobile Insurance Services:

Warner provides a range of policy processing, policy administration, and claims administration services that permit automobile insurance customers to outsource part of or all their policy/claims administration.

The scope of Warner's services has developed over the years from its initial services of just policy processing to full-service capabilities in 1991, including claims adjusting and settlement services. Previously, Warner had subcontracted all claims adjusting and settlement work to a third party.

Policy Processing:

Warner processes voluntary and mandatory (assigned risk) auto policies using its proprietary Automobile Insurance Processing System

(AIPS). AIPS is an on-line system that provides customers with immediate access to information regarding drivers, vehicles, claims coverage, and cash transactions.

- AIPS provides policy rating, billing and collections, underwriting rules, endorsements, policy quotation and issuance, cancellations and reinstatements, forms productions, and management and statistical reporting.
- There are currently approximately 1.5 million policies maintained on the AIPS data base, including 45,000 policies for which Warner also provides policy and claims administration services. Although over 90% of these policies are New York and New Jersey policies, Warner also maintains policies from other states, including California, Connecticut, Louisiana, Pennsylvania, Texas, and Florida.
- Approximately 20 major national insurance companies maintain policies on AIPS, including Colonial Penn Group, Kemper Group, Crum & Forster Insurance Companies, Hanover Insurance Companies, Continental Insurance Company, and the JUA/MTF.

Policy Administration:

Policy administration services consist of all services required in connection with the issuance and maintenance of an auto insurance policy and are processed on AIPS.

- Services include policy issuance; rating; rate pursuit; billing, disbursements, and collections; underwriting; renewal issuance; record updates; non-renewal notices; endorsements/policy changes; cancellations; net commission statements; reinstatements; ID cards; records management; management reporting; and statistical interfaces.

Claims Administration:

Claims administration services consist of all the services necessary to adjust and settle auto insurance claims.

- Services include first report of claims, administering arbitration, establishing and maintaining claim files, containing medical costs, determining reserves, overseeing litigation, appraising and settling claims, pursuing salvage recovery, subrogating claims, management and statistical reporting, legal defense, and investigating possible fraud.

- Prior to fiscal 1991, all claims servicing had been subcontracted to Material Damage Adjustment Corporation, which has an agreement to provide such services for the duration of Warner's contract with the JUA/MTF.

Warner has acted as the third-party administrator of insurance policies for the JUA since March 1989. In August 1990, Warner announced an agreement with the New Jersey Department of Insurance under which Warner became a servicing carrier for the MTF (the organization formed to replace the JUA) under a three-year agreement effective October 1, 1990.

- Warner, as third-party administrator, furnishes the necessary personnel, materials, services, equipment, and facilities for the provision of day-to-day automobile insurance policy services traditionally provided by an authorized automobile insurance company.
- The MTF pays Warner monthly for providing policy issuance and claims settlement in accordance with a fee schedule.
- During fiscal 1992, Warner processed, as a third-party administrator, in excess of 250,000 MTF policies.
- JUA/MTF-related activities accounted for 75% of Warner's revenue in fiscal 1992, compared to 81% of revenue in fiscal 1991, and 60% in fiscal 1990.
- Revenue and expenses related to the MTF contract will decline significantly during the run-off year (fiscal 1993).

COVER-ALL Systems, Inc.:

Through COVER-ALL Systems, Warner provides microcomputer-based software products to property and casualty insurance companies. COVER-ALL^R creates systems to rate and issue any personal, commercial, or specialty line of insurance. Each system is customized to fit the individual insurance company's rates, underwriting rules, and coverage. There are currently over 30 companies using COVER-ALL.

Industry Markets

Approximately 98% of Warner's fiscal 1992 revenue was derived from the property and casualty insurance industry, and 2% from cross-industry data base services.

Major insurance industry clients include the following:

- The JUA/MTF accounted for 75% (\$66.4 million), 81% (\$44.4 million), and 60% (\$27.7 million) of total revenue for fiscal 1992, 1991, and 1990, respectively.
- The contract with Atlantic Employers Insurance Company and Pacific Employers Insurance Company accounted for about 10% (\$9 million) of total revenue in fiscal 1992. This revenue will continue to grow during fiscal 1993 as the number of policies serviced is expected to increase from 40,000 to more than 70,000 by the end of fiscal 1993.

Geographic Markets

One hundred percent of Warner's fiscal 1992 revenue was derived from the U.S.

The company has offices in Fair Lawn, Somerset, and Teaneck (NJ); and Irving (TX).

Warner maintains data centers in Fair Lawn and Teaneck (NJ).

Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

August 1995

West Publishing Company

**Chairman
& CEO:** Dwight D. Opperman
President: Vance K. Opperman
610 Opperman Drive
Eagan, MN 55123-1396
Phone: (800) 778-8090

Status:	Private
Employees:	7,600
Revenue:	\$ 650,000,000*

* INPUT estimate

Key Points

- West Publishing is a publisher of legal data for the legal community and produces WESTLAW®, the computer-aided legal research service, and West's CD-ROM Libraries™.
- In 1995, West Publishing completed its acquisition of The Rutter Group™, a publisher of practice guides and seminar materials.
- In 1994, West Publishing acquired Information America, a provider of on-line

databases and on-site document retrieval services.

- In May 1994, West Publishing agreed to offer direct access to *Dow Jones News/Retrieval*.

Company Description

West Publishing is a privately-held company that publishes legal material in electronic and print format for the legal, accounting, tax and government professionals. Electronic services include WESTLAW, West CD-ROM Libraries, West's® Desktop Practice Systems® and WESTFAX®.

The company was started in 1872 as John B. West, Publisher and Bookseller, to sell law treatises, dictionaries, office supplies, legal

forms and a lawyer's guide to the Minnesota Court Rules in Swedish.

Organization and Structure

Headquartered in Eagan (MN), West Publishing maintains legal publications offices in Cleveland (OH) and Westbury (NY). The company's editorial offices and 26 West Information Centers are located nationwide.

The company's subsidiaries include:

- **Banks-Baldwin Law Publishing Company**—Acquired in 1993, Banks-Baldwin publishes legal publications for Indiana, Kentucky and Pennsylvania, on hard copy as well as PC-based and CD-ROM versions. It is based in Cleveland (OH).
- **Data Retrieval Corporation of America**—Based in Milwaukee (WI), Data Retrieval develops and sells software that helps manage extremely large textual databases.
- **Information America, Inc.**—Based in Atlanta (GA), Information America offers on-line databases and on-site document retrieval services that provide access to information on businesses, assets, people and government records.
- **Tailored Solutions**—Acquired in 1993, this subsidiary offers PC-based administrative software packages. It is located in Berkeley (CA).
- **The Rutter Group**—Based in Encino (CA), this group publishes practice guides and seminar materials authored by federal and state judges and lawyers.

West's College and School Division publishes more than 1,600 titles in various academic disciplines, as well as textbooks for secondary and elementary-level students.

West's Legal Education Division publishes texts, casebooks and teaching and study material for law school students and professors.

Company Strategy

West Publishing has grown from a legal book publisher into an information company. The company is focused on its goal of getting its customers the reliable and accurate information they need, in any medium they desire.

West Publishing does all of its work in-house, from writing and editing, pre-press activities, printing, to marketing of all products.

Financials

INPUT estimates that West Publishing had revenue of approximately \$650 million in 1994, a 6% growth over 1993.

A three-year revenue summary appears on the following page.

INPUT estimates that WESTLAW had sales in 1994 of approximately \$210 million, compared to an estimated \$195 million in 1993.

Market Financials

West Publishing markets its products and services mainly to the professional, business and legal industries.

West Publishing Company
Three-Year Financial Summary
 (\$ Millions)

Item	Fiscal Year		
	1994	1993	1992
Revenue *	\$650	\$615	\$580
• Percent change from previous year	6%	6%	6%

* INPUT estimates

Geographic Markets

INPUT estimates that approximately 95% of the company's 1994 revenue was derived from the U.S. and the remaining 5% from other international sources.

Acquisitions

In 1995, West Publishing acquired The Rutter Group, based in Encino (CA).

The Rutter Group publishes practice guides and seminar materials authored by judges and lawyers.

- The acquisition was accounted for as a purchase.

In November 1994, West Publishing announced the acquisition of Information America, Inc. for approximately \$35 million.

- Information America provides database and related services to legal, professional, banking, government and Fortune 500 clients.
- Information America reported a revenue of \$25.2 million in 1993.

Employees

As of June 1995, West Publishing had approximately 7,600 employees.

Key Products and Services

West Publishing provides information through CD-ROMs, on-line computer-assisted legal research service, legal practice software, data retrieval software, law books, law school texts, and college, high school and junior high texts.

Company offerings include the following:

- **WESTLAW**—A computer-assisted legal research (CALR) service that contains nearly 5,000 databases, including federal cases, the United States Code Annotated, and state statutes, federal regulations, administrative law decisions, topical databases, periodicals, West's Insta-Cite®, West's QuickCite, Shepard's Citations, Shepard's PreView, Black's Law Dictionary on WESTLAW, as well as gateway access to QUICKLAW, Dun & Bradstreet and exclusive access to *The Wall Street Journal* and *Dow Jones News/Retrieval* databases.
- **WIN**—Allows the user to search WESTLAW using a standard English or Natural Language description of the issue.
- **West CD-ROM Libraries**—CD-ROM offering that covers state case law, state statutes, federal statutes and topics such as Federal Securities, Federal Tax, Federal Practice and Procedure, Bankruptcy, Government Contracts, Military Justice and Court-Martial Reports.



Vendor Profile

A Publication from INPUT's Vendor Analysis Program – U.S.

April 1996

Wildfire Communications, Inc.

CEO & Founder: William J. Warner
Vice President: Nicholas C. d'Arbeloff

20 Maguire Road
Lexington, MA 02173

Phone: (617) 674-1500

Fax: (617) 674-1501

Internet: [Http://www.wildfire.com](http://www.wildfire.com)

Status:	Private
Employees:	45
Revenue:	\$8,000,000
Fiscal Year End:	12/31/95

Key Points

- Wildfire Communications develops and markets Wildfire, an Electronic Assistant system. Through speech recognition, Wildfire understands spoken commands and manages telephone-related tasks.
- Wildfire was created from the desire to improve the way that people connect and communicate. The Wildfire Assistant, targeted to professionals who need to be as productive on the road as in the office,

manages all telephone-related communications: incoming and outgoing calls, schedules follow-up calls, gives the user reminders, and maintains a complete contact list.

- The company has completed three rounds of venture-capital funding: \$2 million in September 1992 (Matrix Partners); \$5.4 million in September 1993 (Greylock); and \$7.3 million in January 1995 (AT&T Wireless, formerly McCaw Cellular).
- AT&T Wireless Services and Pacific Bell Mobile Services will be offering the Wildfire Assistant service through their networks in 1997.

Company Description

Wildfire Communications, Inc. is a pioneer in the field of electronic-assistant technology. Introduced in October 1994, the Wildfire Electronic Assistant combines the latest in speech-recognition, computer, and telephony developments to help professionals connect with key contacts in less time and with less effort, increasing their overall ability to communicate.

Organization and Structure

Wildfire Communications' key executives are listed below.

Wildfire Communications Key Executives

Name	Title
William J. Warner	CEO and Founder
Nicholas C. d'Arbeloff	Vice President and Co-Founder
Richard A. Miner	Director of Engineering and Co-Founder
Tony Lovell	Designer and Co-Founder
Ed Rarick	Vice President of Sales
Jack Garrahan	Director of Sales

Company Strategy

Wildfire's strategy is to produce the best communication systems for people who spend a great deal of time out of the office. The product is sold through a direct sales force and provided to end users through service providers who acquire the system from Wildfire.

Financials

Wildfire's first product release was in 1994. There were approximately four customers of

the Wildfire Assistant in 1994. Within the first quarter of product release, Wildfire had more than \$1 million in bookings.

Market Financials

The Wildfire Electronic Assistant is not targeted to any single industry market. The majority of Wildfire's clients appear to be Authorized Service Providers, as the product is fairly high priced for most companies.

Geographic Markets

The Electronic Assistant is currently available in the U.S. and Canada.

Employees

Wildfire currently has 45 employees, segmented as follows:

Marketing and sales.....	7
Customer support.....	5
Research and development	29
Computer operations.....	1
General and administrative	3
	45

Key Products and Services

The Wildfire Electronic Assistant is the company's only product. Wildfire also provides consulting services to customize its software.

Wildfire Electronic Assistant uses speech recognition to do what secretaries used to do—handle incoming and outgoing telephone calls, schedule follow-up calls, give the user reminders, manage all messages, maintain a complete contact list, and schedule conference calls. The user can call Wildfire from a car phone, pay phone, mobile phone or hotel phone and, in a single "session" with Wildfire, take care of all these communications tasks. In March 1996, Wildfire announced conferencing capabilities for Electronic Assistant.

Wildfire Electronic Assistant uses speech recognition, digital telephony, and object-oriented databases.

In March 1996, Wildfire announced a new sales model and pricing structure for Electronic Assistant that gives Authorized Service Providers more flexibility and cost savings in purchasing Wildfire servers.

- Now, rather than purchasing bundled Wildfire servers directly from Wildfire, Authorized Service Providers purchase hardware from their choice of Wildfire Approved Business Partners, and the Wildfire Assistant software from Wildfire. The system is shipped from the hardware supplier fully configured with 12 Wildfire Assistants, which support 40 to 60 users.
- A fully configured, bundled Wildfire server previously listed for \$100,000. By purchasing fully configured hardware from an Approved Business Partner for \$28,000 and software licenses (supporting 40 to 60 users) from Wildfire for \$30,000, an Authorized Service Provider can now get the same system for \$58,000.
- End users can now subscribe to Wildfire service starting at \$39 per month.

Clients

Authorized Service Providers that offer the Wildfire Electronic Assistant to users include:

- Advanced Communications Technology
- Virtuosity
- Milcom Corp.

- Concierge Ltd.
- EMIT
- Harwell Communications, Inc.
- MessageBank
- TCM, Inc.
- Virtual Phone
- AnsaVoice
- CTI
- Execunet
- Overlook Communications

Users of the Wildfire Electronic Assistant include:

- Montgomery Securities
- Warner Brothers Studios
- First Albany Corp.
- Institute for the Future
- Bear Stearns & Company
- Against All Odds Productions

Marketing and Sales

Wildfire Communications markets its products and services through a direct sales force and through Authorized Service Providers that provide the Wildfire service for a monthly fee.

Competition

There does not appear to be any direct competition for the Electronic Assistant technology at this time.

INPUT Assessment

Wildfire is a fairly new company that has caught on fast. Using the Authorized Service Providers as a channel to get the product out into the marketplace is working very well for Wildfire.



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**COMPANY
PROFILE**

INPUT[®]

WORDPERFECT CORPORATION

1555 N. Technology Way
Orem, Utah 84057
Phone: (801) 225-5000
Fax: (801) 228-5077

President:	Adrian Rietveld
Status:	Private Corporation
Total Employees:	4,122 (1/94)
Total Revenue:	\$705,000,000
Fiscal Year End:	12/31/93

Key Points

- On January 1, 1994, Dr. Alan C. Ashton stepped down as CEO and president of WordPerfect Corporation (WordPerfect). Adrian Rietveld has been named president and CEO succeeding Dr. Ashton.
- In November 1993, WordPerfect signed a letter of intent to purchase SoftSolutions Technology Corp. SoftSolutions, headquartered in Orem, Utah, will operate as an independent business unit of WordPerfect Corp.
- In January 1994, Mr. Rietveld outlined his plan to achieve a 10-15% market share of the application suites market in 1994.
- WordPerfect has teamed with Borland in a cross-marketing agreement giving their respective users a price break on the other company's key products. This packaging allows them to offer a product suite called WordPerfect Office.
- WordPerfect is embarking on an aggressive schedule this year to deliver products and technologies from wireless support for WordPerfect Office 4.0 to PowerPC versions of its products.

**Company
Description**

WordPerfect began operation in 1979, as Satellite Software International (SSI), and initiated international expansion in 1981. Founded by Alan C. Ashton and Bruce W. Bastian, without the benefit of venture capital, the company now employs more than 4,500 people and is represented throughout the world by 23 WordPerfect offices and 34 distributor offices that serve 117 countries. WordPerfect, which is available in 28 languages, has an installed worldwide user base of more than 15.5 million.

Financials

In 1993 the company reported revenue of over \$700 million.

In 1991, the company changed the way it reports revenues. In previous years, sales figures included 100% of domestic sales and only 50% of international sales from affiliates.

Sales figures for 1991 (\$600 million) are a more accurate reflection of sales volumes because they include total worldwide sales.

In the five-year summary that follows, results prior to 1991 include 100% of domestic sales and only 50% of international sales.

**WORDPERFECT CORPORATION
FIVE-YEAR REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR				
	1993	1992	1991	1990	1989
Revenue	\$705	\$575	\$600	\$452	\$281

Market Financials

WordPerfect Corporation derives its revenues from across all industry sectors. For 1993, revenue was derived approximately as follows:

Distributors and dealers	55%
Government	15%
Computer retail chains	15%
Large accounts	7%
Education	7%
OEMs	1%
	100%

Geographic Markets

Approximately 60% of 1993 revenue was derived from the U.S., 6% from Canada and 34% from other international sources.

WordPerfect has 23 WordPerfect offices and 34 distributor offices that serve 117 countries.

- International WordPerfect offices are in Australia, Belgium, Brazil, Chile, Denmark, France, Germany, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland and the U.K.

Operations/Structure

WordPerfect is lead by a three-member Office of the President comprised of Ad Rietveld, president and CEO; John C. Lewis, executive vice president; and R. Duff Thompson, executive vice president and general counsel.

Newly acquired SoftSolutions will remain an independent business unit of WordPerfect.

WordPerfect has formed a small- to medium-size business group that will focus on customers with 50 to 299 PCs.

Employees

As of January 1994, Word Perfect had over 4,500 employees.

Strategy

WordPerfect' stated mission is to help the world communicate by providing software tools for people to effectively process, share and present information. With the document at the heart of written communication, the WordPerfect Information Systems Environment (WISE) strategy has been designed to provide a framework for developing "best-of-class" software for users to prepare, share and present information across a variety of computing platforms. An underlying messaging mechanism promotes seamless integration among WISE applications.

WordPerfect Corporation continues to offer award-winning, personalized customer support for all of its U.S. and Canadian customers.

- Approximately one-fourth of WordPerfect Corporation's employees work in customer support, problem resolution, information services, and SWAT (Strategic WordPerfect Assistance Team) positions.
- WordPerfect Corporation's development team uses information gleaned from customer service representatives. In addition, product

developers use the in-house Usability Center to test products during the development process.

- WordPerfect continues to set industry standards in customer service. The company introduced the industry's first "hold studio" in 1990, and employs hold jockeys to monitor calls traffic and to offer customers up-to-date hold times as well as product information. In relation to traditional support, the company offers within-product coach features, BBS and Compuserve forums, toll-free fax retrieval and TDD/TTY for the hearing impaired.

Acquisitions

In 1993, WordPerfect purchased SoftSolutions, a developer of document-management tools in Orem, UT.

In October 1992, WordPerfect acquired BeagleWorks for the Macintosh from Beagle Bros. Inc. BeagleWorks is an integrated Macintosh program that features six modules--word processor, database, draw, paint, communications and spreadsheet with charting.

In June 1992, WordPerfect acquired MagicSoft, Inc. of Lombard (IL). MagicSoft produces MTEZ, a data communications package, and ExpressFax, a fax communications package.

- MagicSoft products are currently bundled with such OEMs as Dell, Megahertz, ZOOM Telephonics, Rockwell, Practical Peripherals, Intel and U.S. Robotics.
- The skills and technology of the MagicSoft developers will benefit WordPerfect Office, WordPerfect Corporation's E-mail, calendaring and scheduling package.

In January 1992, about 640 of SoftCopy, Inc.'s employees became WordPerfect Corporation employees.

- SoftCopy is one of the country's leading software fulfillment companies, duplicating software and assembling software packages for major software developers.
- SoftCopy originally spun off from WordPerfect Corporation in 1984 to do business for other vendors, in addition to WordPerfect Corporation. About 91% of SoftCopy's 1991 sales came from WordPerfect Corporation business.
- The reorganization allows WordPerfect Corporation to more closely integrate its manufacturing operations.



Alliances

- In 1993, Borland International, Inc. and WordPerfect constructed an innovative alliance. This alliance was designed as a collaboration on an application software suite for the office that competes with Microsoft Corporation's Office and Lotus Development Corporation's SmartSuite.
- In 1993, West Publishing Company and WordPerfect Corporation announced a strategic alliance to work together to provide tighter integration of the software and legal research tools that they provide to the legal profession. West is now a premier developer for WordPerfect. A prototype product of the alliance is WESTMATE 5.2 for Windows. The software will allow users to access the WESTLAW online services and retrieve results without ever leaving WordPerfect.
- In an effort to work toward multivendor database connectivity solutions, WordPerfect Corporation announced participation with Borland, IBM, and Novell in Borland's IDAPI (Integrated Database Application Programming Interface) standard.



Key Products and Services

One hundred percent of WordPerfect Corporation's 1993 revenue came from the sale of applications software packages.

Leading in Windows and DOS technology, WordPerfect manufactures one of the world's leading word processing packages, WordPerfect. Other major products include WordPerfect Office workgroup software, WordPerfect InForms and WordPerfect Presentations. Versions of WordPerfect are available for DOS, Windows, Macintosh OS/2, UNIX VMS, NeXT and the AS/400. WordPerfect Corporation develops and sell software in the business, workgroup and consumer market categories.

Information Processing Products:

The first element of WordPerfect Corporation's WISE strategy is information processing. The company supports open application programming interfaces (APIs) and markets the following information processing software:

WordPerfect 6.0 for Windows combines the popular features of the WordPerfect word processor with the intuitive Windows graphical interfaces.

In September 1993, WordPerfect announced WordPerfect Office for UNIX running on Sun Microsystem's Solaris 1.0.

LetterPerfect 1.0 is an entry-level word processor compatible with WordPerfect 5.1. It runs well on machines with limited storage, such as battery-powered laptops.

LetterPerfect 2.1 for Macintosh is a streamlined version of WordPerfect 2.1 for Macintosh. It contains all the features needed for creating everyday memos, letters and reports.

WordPerfect Works 1.0 is an integrated software package that includes a word processor, a flat file data base, a graphics editor, communications capabilities and a spreadsheet application.

DataPerfect is a flexible data base definition and management package. Report capabilities include prompting, testing, searching, record modification and record creation.

Information Sharing Products:

WordPerfect Corporation is committed to using existing messaging technology (e.g. VIM, MAPI, OCE) while also introducing advancement in its own information sharing technology.

WordPerfect Office 4.0 combines electronic mail, calendar and scheduling software into one application.

- Under a powerful desktop, any combination of mail, calendar, or scheduler can be viewed at one time. In its initial release, WordPerfect Office 4.0 will be available for DOS, Windows and Macintosh operating system platforms.
- WordPerfect Office currently has nearly one million users on a variety of platforms, including Windows, DOS, UNIX, VAX/VMS, and a direct connection to OV/VM PROFS.

WordPerfect InForms supports creating and filling in forms--both electronic and printed. The collected information can be transferred directly into a database. WordPerfect InForms was released in 1993 and was sold as two separate packages.

- The Designer package is targeted to users involved in the actual creation of forms.
- The Filler package is for those who need to fill in forms created with the Designer. The package will be available for DOS, Macintosh, OS/2, UNIX, VMS and PenPoint operating systems, as well as in 17 international languages.

Information Presenting Products:

WordPerfect Presentations is a graphics presentations package that offers advanced features and a graphical interface for both DOS and Windows.

WordPerfect Presentations 2.0 for DOS, released in November 1992, moves the company into the multimedia market with its new sound capabilities and introduces features and capabilities new to the DOS presentation graphics market.

Information Distribution:

Information distribution tools add value to the other three elements of the WISE strategy.

Distributing tools can represent and distribute information across applications, regardless of the application's location, language or platform.

WordPerfect Corporation products are designed to support current messaging standards and interfaces such as Novell Global Messaging, VIM (IBM/Lotus/Apple/Borland Novell/WordPerfect), MAPI (Microsoft), OCE (Apple) and DCE (UNIX).

WordPerfect Corporation also offers several gateway products.

In 1994, WordPerfect is shipping WordPerfect Office Remote for Wireless, a wireless connection that uses RAM Mobile Data network and Intel's Mobidem modems for on-the-road communications.

WordPerfect is currently testing a link between WordPerfect Office 4.0 and mobile pagers. The one-way software system, developed with Motorola will ship in the second quarter of 1994 and will allow users to retrieve E-mail from a pager.

**Product
Licensing**

The company provides multi-lingual and enterprise-wide licensing. Large accounts are offered the Customer Advantage Program (CAP) and the software maintenance program as well as discounts on large premium support programs.

Network licensing is based on the number of concurrent users.

Sales and Marketing

After his first month as president, Mr Rietveld outlined a plan to expand WordPerfect's sales overseas, especially in the Middle East, Southeast Asia and Eastern Europe. Within three years, he hopes that WordPerfect's international sales will account for 60% of annual revenue.

As early as 1981, WordPerfect Corporation began international expansion. The company is currently represented by 23 WordPerfect offices and 34 distributor offices covering 117 countries. WordPerfect has also expanded its manufacturing and distribution facilities worldwide.

WordPerfect Corporation develops products for the following platforms: DOS, OS/2, Windows, Apple Macintosh, UNIX, AS/400 and NeXT.

- DOS, the most extensively supported platform, accounted for 80% of business in 1993.
- Windows, which sold 1.5 million copies in less than a year, accounted for 10% of business.
- Apple Macintosh accounted for 3% of business.
- UNIX (13 versions) accounted for 3% of business.
- DEC VAX accounted for 2% of business.

Clients

WordPerfect has an installed worldwide user base of more than 15.5 million.

Competition

WordPerfect Corporation's competitors by product area include the following:

- Word processing: Microsoft (Word) and Lotus (AmiPro)
- Presentation graphics: Microsoft (PowerPoint), Software Publishing (Harvard Graphics), Micrografx (Charisma), Aldus (Persuasion) and Lotus (Freelance)

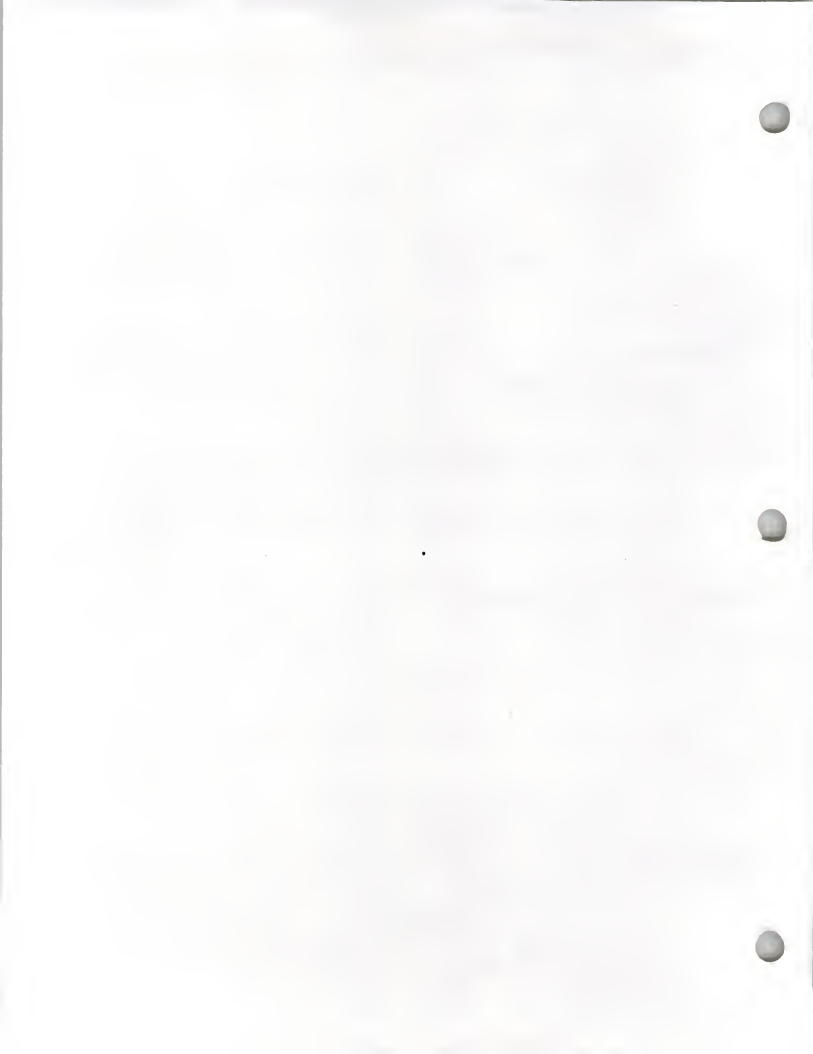
- Office automation:
 - PC LAN: Lotus (cc: Mail), Microsoft (Mail)
 - Macintosh: QuickMail (QuickMail)
 - Groupware: Lotus (Notes and SmartSuite) and Microsoft (Windows for Workgroups)

INPUT Assessment

WordPerfect is about to go through one of the most difficult periods in its history. Adrian Rietveld took control of the company just weeks before it is expected that the company will announce its first layoff in its 12-year history. In addition, a delayed public offering and rumors of a merger with Borland or Novell followed the company in 1993.

However, in 1993, WordPerfect launched several new major product releases as planned, including a new Windows word-processing package, WordPerfect 6.0 for Windows, putting its products in a much more competitive position in the market and moved away from its one-product-company image. Several more remote computing applications are scheduled for 1994.

INPUT believes that WordPerfect has also made a key acquisition, SoftSolutions. SoftSolutions brings resources to focus on and anticipate key product trends, such as the move of desktop applications toward complex document architectures using object technology.



COMPANY PROFILE

WORDSTAR INTERNATIONAL INCORPORATED

201 Alameda del Prado
Novato, CA 94949
(415) 382-8000

Ronald S. Posner, Chairman,
President, and CEO
Public Corporation, NASDAQ
Total Employees: 280 (Full-Time, 6/91)
Total Revenue, Fiscal Year End
6/30/91: \$35,606,000

The Company

WordStar International Incorporated, founded in 1978 as MicroPro International, develops, markets, and supports the WordStar[®] family of word processing software products for microcomputers. During 1989, the company changed its name to WordStar in order to maximize its products' brand recognition.

- In March 1991, WordStar expanded its product line with the acquisition of Lifetree Software, Inc. for nearly \$2 million in cash and stock. Lifetree, marketer of writing enhancement software for microcomputers, now operates as WordStar's Writing Tools Group.
- During 1991, WordStar changed its fiscal year end from August 31 to June 30, adjusting the company's fiscal quarters to match calendar quarters, which is more normal in the software industry.
- In September 1991, WordStar released WordStar for Windows, which incorporates technology licensed from NBI in early 1991.
- In March 1992, WordStar and Delrina Corporation of Ontario (Canada) announced their intent to merge. The pooling-of-interests transaction is expected to be completed over the next few months. Delrina, with sales of \$7.7 million (Canadian) for the six months ending December 1991, markets forms software and software for sending/receiving faxes directly from within any Windows application.

The company's strategy is to build on WordStar's strong brand name and large installed base through worldwide distribution channels with new management, aggressive upgrades of existing products, new technologies, and new marketing programs, while returning the company to profitability.

Revenue for the twelve months ending June 30, 1991 was \$35.6 million, a 5% decrease from \$37.4 million for the twelve months ending August 31, 1990. Net losses of \$7.5 million for fiscal 1991 include charges of \$914,000 for reorganization costs and \$1.9 million for costs for purchased software and development associated with the Lifetree acquisition. A five-year financial summary follows:

WORDSTAR INTERNATIONAL INCORPORATED
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)

ITEM	FISCAL YEAR				
	6/91	8/90	8/89	8/88	8/87
Revenue	\$35.6	\$37.4	\$43.2	\$42.5	\$41.3
• Percent change from previous year	(5%)	(13%)	2%	3%	8%
Income (loss) before taxes (a)	\$(6.8)	\$(3.5)	\$(1.6)	\$(3.5)	\$4.0
• Percent change from previous year	(b) (94%)	(119%)	(c) 54%	(188%)	256%
Net income (loss)	\$(7.5)	\$(4.6)	\$(3.0)	\$(5.1)	\$2.9
• Percent change from previous year	(63%)	(53%)	41%	(276%)	336%
Earnings (loss) per share	\$(0.54)	\$(0.33)	\$(0.22)	\$(0.38)	\$0.22
• Percent change from previous year	(64%)	(50%)	42%	(273%)	320%

* Percent change exceeds 1,000%.

- (a) Includes reorganization costs of \$914,000, \$1.3 million, \$470,000, and \$237,000 for fiscal 1991, 1990, 1989, and 1988, respectively.
- (b) Includes \$1.9 million in charges associated with the acquisition of Lifetree.
- (c) Includes a \$1.1 million write-off of an investment in a Macintosh product acquired from Challenger Software in 1987.

Fiscal 1991 results were attributed to the following:

- North American sales decreased 22% primarily due to the market's perception that WordStar represents old technology, resulting in a loss of market share. The company has launched an aggressive advertising and marketing campaign to educate end users as to WordStar's features, product enhancements, and new products. Other factors are increased competition for shelf space and the growing popularity of Windows. In response to these factors, WordStar has made a strategic move to diversify its product line by introducing WordStar for Windows and acquiring the Lifetree product line.

- These declines were partially offset by increased international sales. In Europe, sales increased 10%, or about \$1.4 million, reflecting expansion geographically (a new subsidiary was started in France) and the release of WordStar 6.0 in three European languages. Sales in the Pacific Rim, where new subsidiaries were opened in Hong Kong, Malaysia, Singapore, and Australia, increased 13%, or about \$1 million.
- WordStar's operating expenses were approximately \$33.0 million in fiscal 1991, compared to \$31.5 million in fiscal 1990 and \$34 million in fiscal 1989. Fiscal 1991 expenses include \$1.9 million in charges associated with the acquisition of Lifetree.
- Research and development expenses were \$5.0 million (14% of revenue) in fiscal 1991, \$5.3 million (14% of revenue) in fiscal 1990, and \$5.3 million (12% of revenue) in fiscal 1989.

Revenue for the six months ending December 1991 were \$21.6 million, compared to \$16.6 million for the same period in 1990. Net losses were \$3.2 million, compared to net losses of \$1.9 million for the same period a year ago.

As of June 1991, WordStar had 280 full-time employees. The company currently has 216 employees.

WordStar's primary competitors include WordPerfect and Microsoft. Other competitors include Ashton-Tate (Borland), IBM, Lotus, Symantec, and Software Publishing.

Key Products and Services

One hundred percent of WordStar's fiscal 1991 revenue was derived from the company's various microcomputer software products and associated support services.

- WordStar shipped approximately 956,000 units of its software products in fiscal 1991, compared to 769,000 units in fiscal 1990 and 515,000 units in fiscal 1989.

Word Processing Products:

WordStar Release 6.0, introduced in March 1990, is the current version of the original WordStar, which was introduced in 1979.

- WordStar 6.0 features include scalable font support for a range of printers, advanced page preview, pull-down menus, style sheets, laser printer support, advanced footnoting, a calculator, Lotus 1-2-3 support, dBase support, macros, TelMerge

telecommunications, MailMerge, graphics editor, file converter, spell checker, thesauri and hyphenation.

- WordStar is available in 10 languages, including all of the major European languages.
- Approximately 216,000 units of WordStar 6.0 were shipped in the U.S. and the U.K. through June 1991.
- A CP/M version of WordStar (WordStar CP/M Edition, Release 4) is also available.

WordStar 2000 Release 3.5, released in February 1990, combines a word processing core program with companion products tailored to the needs of users in specific markets.

WordStar for Windows delivers high-end text editing capabilities that include page layout, graphics, table generation, and advanced connectivity tools, such as client and service DDE, DOS file referencing, and LAN support. The product incorporates technology licensed from NBI (Legacy Windows).

Writing Tools Group:

Correct Grammar is a grammar and style checking software application. MS-DOS, Macintosh, and Windows versions are available.

The American Heritage Dictionary is an electronic dictionary and thesaurus. Exclusive retail distribution and marketing rights to the product were acquired from Houghton Mifflin in June 1991. The American Heritage Dictionary is available for MS-DOS and Macintosh platforms.

Lexica is a multilingual translating thesaurus and dictionary to help business people communicate effectively in more than one language. It is available on MS-DOS platforms in English, German, Continental French, Dutch, and Spanish.

Stedman's 25 is an electronic medical spelling dictionary for health care professionals, available on MS-DOS and Macintosh platforms. Exclusive retail distribution and marketing rights to the product were acquired in August 1991 from Wilkins & Williams.

In December 1991, WordStar acquired all rights worldwide to The American English Writing Guide, The American Handbook of Business Letters, and The Instant Library of Quotations from Nova

Development Corporation. WordStar now offers the following three tools for MS-DOS and Macintosh platforms:

- Correct Writing is an on-line reference tool that offers guidelines for proper style, punctuation, and writing techniques by accessing The American English Writing Guide.
- Correct Letters provides users with hundreds of ready-made business letters by accessing The American Handbook of Business Letters.
- Correct Quotes provides users with more than 5,000 quotations for different occasions by accessing The Instant Library of Quotations.

WordStar also licenses several complementary word processing software products for resale directly to the company's installed user base. Products include laser printer fonts, and legal, medical, financial, and foreign dictionaries.

WordStar provides a range of support services to dealers, distributors, corporations, and end users through WordStar's Technical Support Center in Bloomington (IN).

- Free telephone support for the life of WordStar's products is provided through the Center, in addition to pay-for-service support for out-of-warranty products.
- Dealers and distributors receive toll-free technical support.

The Technical Advising Group, based in Novato (CA), provides additional support for customers and for WordStar staff to resolve issues escalated from the Technical Support Center, WordStar subsidiaries, and international distributors. This group maintains the WordStar Forum on the CompuServe electronic bulletin board network.

Industry Markets

WordStar's products are used by microcomputer users for business and personal applications.

The company's products are marketed worldwide through a direct sales force to end users, dealers, and distributors and through contracts with OEMs.

Geographic Markets

INPUT estimates that approximately 37% of WordStar's fiscal 1991 revenue was derived from the U.S. and 63% from international sources.

A three-year geographic summary of source of revenue, as provided by WordStar, follows:

**WORDSTAR INTERNATIONAL INCORPORATED
THREE-YEAR SOURCE OF REVENUE SUMMARY
(\$ millions)**

ITEM	FISCAL YEAR					
	6/91		8/90		8/89	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
North America	\$13.8	39%	\$17.7	48%	\$23.8	55%
Europe						
- U.K.	10.2	29%	9.4	25%	10.1	23%
- Germany	3.2	9%	2.3	6%	2.5	6%
- Other	1.6	4%	2.0	5%	1.2	3%
Pacific Rim						
- Japan	3.1	9%	3.2	8%	3.5	8%
- Asia/Australia	2.8	8%	2.1	6%	1.7	4%
- Other	0.9	2%	0.7	2%	0.4	1%
TOTAL	\$35.6	100%	\$37.4	100%	\$43.2	100%

WordStar has subsidiaries in France, Germany, Ireland, the U.K., Australia, Malaysia, Hong Kong, Singapore, and Japan.

- The subsidiaries in Japan, Ireland, and Singapore coordinate manufacturing and distribution facilities for their respective regions. The Japanese subsidiary also provides research and development support. During 1991, WordStar closed the research and development efforts in its Irish subsidiary.
- In Europe the company's business is oriented to both distributors and OEMs, whereas in Japan OEM sales have been a significant factor. The Japanese subsidiary also performs special development projects for major OEMs.

WordStar has distributors in those countries where it has subsidiaries, and in Italy, Denmark, Finland, Hungary, Spain, Portugal, Yugoslavia, Brazil, Paraguay, Uruguay, Chile, Argentina, Venezuela, Mexico, and Columbia.

Vendor Profile

A Publication from INPUT's Vendor Analysis Program - U.S.

March 1996

Worldwide Chain Store Systems (WCSS, Inc.)

President & CEO:
8501 IBM Drive
Building 104
Charlotte, NC 28262
Phone:
Fax:

Owen Shea

(704) 595-6700
(704) 595-6789



Worldwide
Chain Store
Systems

An
IBM Company

Status:	Subsidiary
Parent:	IBM Corporation
Employees:	200
Revenue:	\$ 40,000,000*
Fiscal Year End:	12/31/95

* INPUT estimate

Key Points

- Worldwide Chain Store Systems (WCSS, Inc.) provides premier supply chain management software and services solutions to clients worldwide.

- In April 1993, WCSS acquired the AS400/DS solution from IBM, along with professional staff from Info Systems of Charlotte (NC). This acquisition builds on WCSS' core competence in logistics and enables the company to expand its expertise into broader market segments.

Company Description

WCSS, headquartered in Charlotte (NC), is a wholly owned subsidiary of IBM. The company provides warehouse automation systems and integrated supply chain management software solutions to apparel,

automotive aftermarket, consumer electronics, drug, food services, grocery, hardlines, health and beauty care, liquor and general merchandise manufacturers, wholesalers and retailers.

- The company's suite of Supply Chain Management software, now called SCManager and SCExecutive, includes Purchasing, Store Order Management, Labor Management and Warehouse Management with a radio frequency interface.
- In addition, WCSS offers the DCDirector, a real-time warehouse control system that directs all goods through the warehouse operation.
- WCSS also offers a range of logistics and application consulting and professional services, including business process reengineering, project management, software modification and installation.

WCSS was founded by Charles Fitzmorris in 1970 to provide supply chain management to the grocery industry.

- The company reorganized and incorporated in 1989 and was partially acquired by IBM.
- WCSS, Inc. became a wholly owned IBM company in November 1992.
- In April 1993, WCSS acquired the AS400/DS solution from IBM, along with professional staff from Info Systems of North Carolina.

Company Strategy

The focus of WCSS has been and will continue to be to provide significant new business functions that allow clients to manage their supply chain operations more effectively.

WCSS remains committed to continuing to offer SCExecutive in the IBM ES/9000 DB2 environment and SCManager on the IBM AS/400 platform. WCSS also offers its solutions on selected UNIX platforms, specifically AIX (the IBM RS/6000) and HP-UX (HP 9000).

WCSS' longer term development direction calls for the continued use of object-oriented programming technology.

- New languages, system structures and selected relational databases will allow WCSS to provide more timely and flexible supply chain solutions for its clients.
- The first step in this direction is the DCDirector, a system designed in an object-oriented architecture, generated with SYNON's CASE technology. This system is available on the HP 9000, IBM AS/400 and RS/6000 platforms.

Through these efforts, WCSS anticipates that clients will experience greater flexibility and increased maintenance productivity, the ability to communicate across multiple distributed systems, high modularity of the software, better graphical user interfaces, and client/server support.

Financials

As a wholly owned subsidiary of IBM, WCSS' financial reporting is consolidated in IBM's figures.

INPUT estimates that WCSS' 1995 revenue was approximately \$40 million, up 15% to 20% over 1994.

Market Financials

WCSS' revenue is derived primarily from manufacturers, and retail and wholesale distributors of the following goods: apparel, automotive aftermarket, bakery, consumer

electronics, drug, grocery, hardgoods, health and beauty care, liquor and general merchandise.

Geographic Markets

Approximately 70% of revenue is from the U.S. and 30% from international markets.

WCSS maintains operations throughout the world, with offices in Chicago (IL), Charlotte (NC), Atlanta (GA), Cape Town (South Africa), Paris, Manchester and Reading (England).

Key Products and Services

Software Products

DCDirector is a warehouse and distribution center management system that provides real-time control of the warehouse by tracking merchandise at every point within the warehouse and efficiently directing the distribution center work flow.

- By using bar-code technology and radio frequency terminals, merchandise can accurately be identified and tracked at any moment.
- In addition to improving internal distribution center operations, DCDirector interfaces to a company's host to ensure that the latest data is available for operations at the host site or within the distribution center.

WCSS' SCEXecutive and SCManager consist of the following modules:

- **Purchasing Management** is an integrated set of tools that allow buyers and management to control the purchasing function and increase productivity. The system is designed to allow an organization to operate with the least amount of inventory, while maintaining management-mandated service level goals. The system

helps the buyer determine when to place an order and how much to order. In addition to its forecasting and order determination functions, the Purchasing module allows buyers to evaluate vendor deals and promotions. An investment buy function allows the buyer to control the buyout of merchandise near the end of a deal period or preceding a cost increase.

- **The Store Order Management System** provides the ability to receive and process store orders, review and refine the daily picking and transportation plans, release orders for billing, generate letdowns to refill pick locations, invoice the orders, and debit/credit the stores' invoices.
- **The Labor Management System** provides management of warehouse labor. Standard times for each work type are used to measure individual employee performance. Detailed performance information is accumulated in real time as employees perform work assignments. The system also supports management with detailed information on performance and productivity for direct or indirect labor.
- **The Warehouse Management System** provides flexible control over the merchandise in the warehouse, while simultaneously balancing forklift travel distances against cube utilization. The system tracks merchandise through the warehouse through interactive screens, labels and reports. The system also controls the way merchandise is received and stored in the warehouse, updates inventory, helps to manage multiple warehouses, and assists in scheduling inventory control for cyclical accounts.
- **The Radio Linked Warehouse Control System (RLWCS)** is a PC-based application that directs the operation of forklifts via

radio frequency terminals. The forklift operators scan pallet labels as they perform the forklift task, assuring accuracy. After each task is complete, the system dynamically assigns the next task. The system uses pallet move instructions generated by the WCSS Warehouse Management and Store Order Management systems. When used with the WCSS Labor Management System, RLWCS displays the engineered standard time as it directs the operator to perform a task.

WCSS currently has more than 100 software and services clients.

Consulting Services

WCSS' newest service—the Systems Utilization Review—allows customers to increase their productivity return on installed WCSS software. The System Utilization Review examines how a company is currently using WCSS Supply Chain Management software.

Simulation Modeling is a client service offered by WCSS consultants. This offering allows the customer to identify a particular process and test alternatives in order to minimize capital and software expenditures when implementing a new distribution solution.

WCSS' Risk Analysis is a consulting service that statistically analyzes the business case and project schedule for a customer-identified project, tests assumptions for a warehouse installation, and identifies probabilities for the range of possible completion dates and total costs.

WCSS also offers a range of logistics and application consulting and professional services, including business process reengineering, project management, software modification and installation.

Clients

The company's client base includes AHOLD, Foodtown, McCarty Holman, Manor Bakeries, Nintendo, Tandy Corporation, UniChem, Vanity Fair, Verbatim, WestPoint Stevens and Williams-Sonoma.

Marketing and Sales

WCSS markets its products through a direct sales force and through strategic alliances with other business partners.

Alliances

In September 1994, WCSS and Hewlett-Packard entered into a joint development and marketing agreement to enable the extension of selected WCSS products to the HP 9000 open system HP-UX environment. The appropriate development environment and tools are provided to WCSS in support of the development effort for WCSS' software solutions in HP-UX.

WCSS also has relationships with multiple hardware vendors, including Teklogix, Telxon, LXE, Norand, Symbol and Zebra.

COMPANY PROFILE

XEROX COMPUTER SERVICES

5310 Beethoven Street
P.O. Box 66924
Los Angeles, CA 90066
(310) 306-4000

Joel B. Nagelmann, President
Division of Xerox Corporation
Total Employees: 200
Total Revenue, Fiscal Year End
12/31/91: \$40,000,000*

*INPUT estimate

The Company

Xerox Computer Services (XCS) currently markets and supports the CHESS family of enterprise-wide open systems software products for the manufacturing, distribution, and financial applications of manufacturing companies. The CHESS family, introduced in 1990, incorporates a complete MRPII system that is independent of operating and data base management systems and portable to most major hardware platforms.

- XCS was founded in 1970 to provide on-line processing services for business applications to manufacturers, distributors, and service organizations.
- During the early 1980s, XCS began licensing its MRPII software for in-house use on IBM 9370, 4300, and 30xx computers as Xerox Business Management System (XBMS). XCS continues to support, but no longer actively markets, approximately 140 XBMS installations.
- XCS operates as a division of Xerox Corporation, a \$17.8 billion, 110,000-employee, Stamford (CT)-based international company that develops, manufactures, and markets a range of document processing products and provides insurance and certain other financial services.

XCS' strategy is to be positioned as an industry leader and pacesetter for Enterprise Resource Planning (ERP) Systems using an open systems environment. XCS is committed to setting and conforming to industry standards and aligning with emerging technology trends.

INPUT estimates that XCS' total 1991 revenue was \$40 million. It is estimated that 1992 revenue could range from \$40 million to \$48 million.

XCS competitors include ASK Computer Systems, Andersen Consulting, Computer Associates, System Software Associates, and IBM.

Key Products and Services

Approximately 85% of XCS' revenue is derived from applications software products and associated maintenance services. The remaining 15% is derived from education and training, consulting, and other professional support services.

CHESS is a family of integrated software products that support the production, distribution, and financial applications of discrete and repetitive manufacturers and wholesale distributors.

- The applications were written using the PRO-IV application development system, are independent of data base and operating systems, and are portable across multiple platforms.
- CHESS is currently available for IBM 9370, 4300, and 30xx systems under VSE, MVS, CICS and IBM RS/6000 systems under AIX; DEC VAX under VMS and DECsystems under ULTRIX; NCR 3000 series systems under UNIX V.4; HP 9000 series under HP-UX; and supports Novell LANs and SCO-XENIX/UNIX. XCS is a Complementary Software House (CSH) for DEC and a Premier Software Solutions Provider for HP.
- There are currently over 130 CHESS customers worldwide.

The following integrated CHESS modules for manufacturing, distribution, financial and technical applications are now available:

Manufacturing:

- Contract Purchase Orders
- Detail Capacity Planning
- Engineering
- Inventory
- Physical Inventory
- Master Production Scheduling
- Material Requirements Planning
- Repetitive Manufacturing
- Shop Floor Control
- Work Orders
- Purchase Orders

Distribution:

- Sales Analysis
- Sales Orders

Financial:

- Accounts Payable
- Accounts Receivable
- Billing
- Costing
- Financial Integration Management
- General Ledger

Technical:

- The External Interface Facility (EIF) permits integration with various third-party products for electronic data interchange, office automation, computer-integrated manufacturing, electronic funds transfer, factory data collection, and PC applications.
- User View is a data reporting tool for creating on-line inquiries or printed reports using data from any CHESS application.

For the base set of 15 applications currently available, prices start at \$75,000 for a small system and \$500,000 for a high-end mainframe system. Additional modules are priced individually.

Additional modules under development include: Sales Order Configurator, Sales Quotations, Vendor Quotations, EDI, Data Collection, DRP, Forecasting, and Inventory Balancing.

Support services provided by XCS include the following:

- XCS operates two 800 numbers to provide access for customer questions and problems. The Quality Customer Service (QCS) facility handles user problems and questions, while the Product and Services line provides general information regarding XCS offerings.
- Ongoing training courses are available at XCS headquarters and certain branch offices for \$250 a day. On-site training is also available for \$1,000 a day. Training can be targeted to executives, middle management, users, or systems and operations personnel.

- Project planning, implementation, customization, and consulting services are also available.

Industry Markets

One hundred percent of XCS' revenue is derived from manufacturers, wholesale distributors, and public services firms.

Targeted industries include discrete, repetitive, and engineered-to-order manufacturers; job shops; and wholesale distribution firms ranging from small, single-site organizations to multinational corporations.

Geographic Markets

An estimated 85% of XCS' 1991 revenue was derived from the U.S. and 15% from international sources.

XCS maintains 11 branch offices in the U.S., including offices in Los Angeles and Palo Alto (CA), Atlanta (GA), Elmhurst (IL), Marlboro (MA), Edina (MN), Rochelle Park (NJ), Nashville (TN), Carrollton and Houston (TX), and Wauwatosa (WI).

XCS has European offices in the Netherlands and the U.K. and a distributor network in Australia and New Zealand.

Computer Hardware

XCS' data center in Los Angeles has the following systems installed:

- 1 IBM ES/9000
- 2 IBM RS/6000s
- 1 IBM AS/400
- 1 Amdahl/MVS
- 1 HP 9000
- 1 NCR 3000
- 2 DEC VAXes

XYVISION, INC.

101 Edgewater Drive
Wakefield, MA 01880-1291
Phone: (617) 245-4100
Fax: (617) 224-5108

Chairman:	Laurence S. Liebson,
President & CEO:	Thomas H. Conway
Status:	Public Corporation
Stock Exchange:	NASDAQ
Total Employees:	190
Total Revenue:	\$22,695,000
Fiscal Year End:	3/31/92

Key Points

- During fiscal 1992, Xyvision focused on completing the transition begun in 1990 from providing proprietary hardware platforms for its publishing systems to new systems based on standard hardware and open-systems technology.
- During fiscal 1992, the company continued to adjust expenses associated with becoming a software and services oriented business, and declining revenues due to the weak worldwide demand in its markets by reducing its work force and making other cost reductions.
- Xyvision is also focused on restructuring the company's financial position, specifically its outstanding \$22.4 million of debentures, representing annual cash interest payments of over \$1.3 million.
- The company's current product strategy is to move beyond the traditional production-oriented, print-on-paper publishing model, and target work groups that collaborate on the creation and production of quality, full-color documents, and publications on paper or in electronic format.
- In January 1992, the company released the Parlance Document Manager™, the first complete version of its new publishing systems product for UNIX-based DEC workstations.

**Company
Description**

Xyvision, founded in 1981, designs and markets turnkey systems for publishing, document management, color design, and prepress production. The company combines its software with standard hardware, selected third-party software, and support services to create integrated systems to improve the productivity of professionals in the printing and publishing industries.

- Xyvision Publishing Systems are used to produce catalogs, books, periodicals, directories, and product support manuals and are marketed to manufacturers, government agencies, professional associations, commercial publishers, printers, and trade service bureaus.
- Xyvision Color Systems are used to produce packaging, inserts, advertisements, brochures, and other high-quality color-printed materials and are marketed to commercial trade shops and prepress service organizations, as well as to consumer goods companies, design firms, and packaging manufacturers.

Financials

Xyvision's fiscal 1992 revenue was \$22.7 million, an 18% decrease from \$27.8 million in fiscal 1991. Net losses were \$5.3 million, compared to \$17 million in fiscal 1991.

A five-year financial summary is shown on the following page.

Xyvision management attributes revenue declines in fiscal 1992 to lower sales of the company's publishing and color systems, the general softness and economic turndown in the company's served markets, and market concerns over Xyvision's financial condition.

Research and development expenses, including capitalized software development costs, were approximately \$5.6 million (25% of revenues) in fiscal 1992, \$7.5 million (27% of revenues) in fiscal 1991, and \$9.0 million (30% of revenues) in fiscal 1990.

Marketing, general, and administrative expenses were \$10.8 million (48% of revenues) in fiscal 1992, \$14.4 million (52% of revenues) in fiscal 1991, and \$21.1 million (70% of revenue) in fiscal 1990. Declines were due to the impact of the restructuring implemented in 1991, further reductions in work force, and cost control measures.

**XYVISION, INC.
FIVE-YEAR FINANCIAL SUMMARY
(\$ millions, except per share data)**

ITEM	FISCAL YEAR				
	3/92	3/91	3/90	3/89	3/88
Revenue	\$22.7	\$27.8	\$30.2	\$46.3	\$34.8
• Percent change from previous year	(18%)	(8%)	(35%)	33%	30%
Income (loss) before taxes	\$(8.9)	\$(17.0)	\$(20.5)	\$1.4	\$(0.2)
• Percent change from previous year	48%	(a) 17%	(a) *	*	(105%)
Net income (loss)	\$(5.3)	\$(17.0)	\$(20.5)	\$2.5	\$(0.2)
• Percent change from previous year	(b) 69%	17%	(920%)	*	(106%)
Earnings (loss) per share	\$(0.95)	\$(3.08)	\$(3.53)	\$0.43	\$(0.04)
• Percent change from previous year	(b) 69%	13%	(921%)	*	(105%)

* Percent change exceeds 1,000%.

- (a) Includes a restructuring charge of \$6.9 million in fiscal 1991 and \$2.2 million in fiscal 1990 primarily associated with the company's program to phase out its proprietary hardware manufacturing business.
- (b) Includes an extraordinary gain of \$3.6 million (\$0.65 per share) from the exchange of debentures for unsecured, unsubordinated promissory notes and shares of common stock.

Employees

As of March 31, 1992, Xyvision had 190 employees, segmented as follows:

Marketing and sales	35
Customer support, training, and documentation	63
Research and development	51
International operations	13
Finance, administration, and other	<u>28</u>
	190

Competitors

Xyvision's electronic publishing systems are targeted to three application segments--manuals and technical documents, commercial publishing, and color electronic design and prepress applications. Xyvision's competitors, by market area, include the following:

- Manual and technical documentation: Agfa CAPS, Datalogics, Intergraph, Interleaf, and Xerox

- Commercial publishing: Agfa, Atex, CCI Europe, Miles 33, Intergraph, and Penta Systems
- Color electronic design and prepress: Agfa, Barco/Disc, Dainippon, Linotype-Hell, Scitex, and Intergraph

Key Products and Services

Approximately 51% of Xyvision's fiscal 1992 revenue was derived from integrated systems and 49% from associated support services. A three-year summary of source of revenue follows:

XYVISION, INC. THREE-YEAR SOURCE OF REVENUE SUMMARY (\$ millions)

ITEM	FISCAL YEAR					
	3/92		3/91		3/90	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
Systems	\$11.6	51%	\$16.7	60%	\$20.0	66%
Service	11.1	49%	11.1	40%	10.2	34%
TOTAL (a)	\$22.7	100%	\$27.8	100%	\$30.2	100%

(a) Includes rental and royalty income of \$8,000, \$85,000, and \$52,000 for fiscal 1992, 1991, and 1990, respectively.

Xyvision Publishing Systems:

Xyvision Publishing Systems are used in major corporations, and work with engineering, manufacturing, and other management information systems to create, manage, and disseminate product information.

- The systems are also used to produce a variety of material in commercial printing and publishing organizations, as well as in-house and independent service bureaus. This information material includes books, journals, magazines, catalogs, directories, financial and legal material, marketing collateral, and other high-quality publications.
- Xyvision systems integrate all elements of document preparation electronically, including text from multiple sources; graphics that may include charts, illustrations, line drawings, and computer-aided design drawings; photographs; and scanned art work. The user can then add design, style, and layout attributes. Users can interactively

compose, paginate, review, and edit text and graphics on workstations. Text and graphics can also be created and edited on PCs.

Xyvision Publishing Systems operate on DEC UNIX-based RISC workstations and servers. Xyvision is also porting its software to IBM RISC workstations and servers.

- Xyvision's Parlance Document Manager manages document storage, organizes document content, and coordinates document creation, maintenance, and production processes.
- Parlance Publisher supports commercial publishing applications by providing tools for efficient work group production of fully integrated documents.

Xyvision continues to derive service revenue from an earlier generation of systems that used proprietary, UNIX-based computers manufactured by Xyvision.

Xyvision Color Systems:

Xyvision also provides the Contex family of electronic color design and production systems that automate full-color design, stripping, and page assembly operations on UNIX-based RISC workstations and servers from Silicon Graphics.

Support Services:

Most of Xyvision's customers enter into maintenance and support contracts and receive training.

- As part of the standard maintenance contract, Xyvision provides software and documentation updates and telephone support.

Xyvision also provides workflow and configuration analysis, preinstallation planning, systems integration, on-site and classroom training, applications support, and consulting.

Clients

In the manuals and technical documentation segment, Xyvision customers include AT&T, Beech Aircraft, Boeing, Canadair, Cummins Engine, Ford Motor, Fujitsu, General Electric, Grumman, Harris, Intel, Naury, McDonnell Douglas, Mitsubishi, Raytheon, Sikorsky Aircraft, Unisys, and Westland Helicopters.

In the commercial publishing applications market customers include AAA, American Institute of Physics, American Medical Association, Butterworths, The William Byrd Press, Chemical Abstracts Services, The Christian Science Publishing Society, Grolier, Harcourt Brace Jovanovich, McGraw Hill, Thomson Professional Publishing Company, and Time-Life Books.

In the color electronic design and prepress application segment, customers include Barcrest, The Box Room, Colgate-Palmolive, Field Packaging, The Gillette Company, Vivicolor, James River, Litho-Plus, Kimberly-Clark, Lincoln Graphics, North American Color, Southern Gravure, Steinau Fisher, and Techtron Imaging Center.

Industry Markets

Xyvision's revenue is derived from the following markets:

- Product manufacturers (aerospace, automotive, heavy equipment, computer, electronic, and software) for manuals and technical documents.
- Commercial publishers; trade service bureaus; and in-plant service organizations for books, magazines and periodicals, catalogs and directories, financial and legal publications, and annual reports and promotional materials.
- Commercial trade shops; prepress service companies; and independent and in-house design organizations for advertising, product packages, promotional displays, and other printed material that involves layout of color images.

Geographic Markets

Approximately 91% of Xyvision's fiscal 1992 revenue was derived from the U.S. and 9% from international sources. A three-year summary of source of revenue follows:

**XYVISION, INC.
THREE-YEAR GEOGRAPHIC SOURCE OF REVENUE SUMMARY
(\$ millions)**

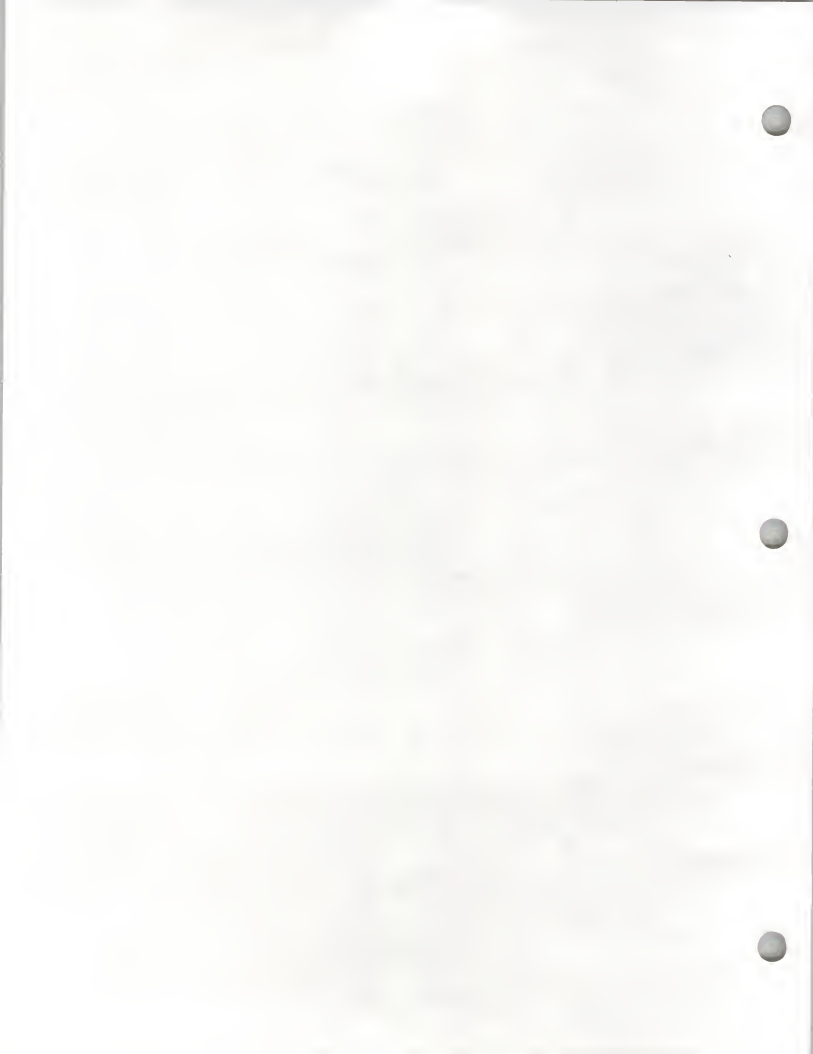
ITEM	FISCAL YEAR					
	3/92		3/91		3/90	
	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL	REVENUE \$	PERCENT OF TOTAL
U.S.	\$20.7	91%	\$23.9	86%	\$23.2	77%
Western Europe	1.3	6%	3.4	12%	5.3	18%
Asia	0.5	2%	0.4	2%	1.0	3%
Australia	0.2	1%	0.1	--	0.7	2%
TOTAL	\$22.7	100%	\$27.8	100%	\$30.2	100%

In addition to its headquarters in Wakefield (MA), Xyvision also has regional offices in Alexandria (VA), Chicago (IL), and Irvine (CA).

International headquarters are in the U.K.

Xyvision Publishing Systems are marketed in the U.S. and Canada primarily through a direct sales force. In Europe, Asia, and Australia, these products and services are provided by independent distributors.

Xyvision Color Systems (Context) are marketed primarily through a worldwide network of value-added resellers. This distribution program is called Context Prepress Partners™.



INPUT VENDOR ANALYSIS PROGRAM DIRECTORY

☐ New Entry ☐ Revised

Please provide as much data as known. Partially complete forms are welcome.

I. GENERAL INFORMATION

Vendor Name: _____

Address: _____

Phone: _____

CEO/President: _____

Name

Title

Key Contact: _____

Name

Title

Total Employees: _____ Year Founded: _____

Company's Primary Business: _____

Type of Ownership:

☐ Public

☐ Subsidiary

☐ Private

☐ Division

Parent Corporation _____

Subsidiaries: _____

Annual revenue \$ _____ Fiscal Year Ending _____ / _____ / _____
Mo Day Yr

—or—Revenue Range:

☐ Under \$1 Million

☐ \$10-20 Million

☐ \$1-5 Million

☐ \$20-40 Million

☐ \$5-10 Million

☐ Over \$40 Million

What percent growth did the company experience over the previous year? _____%

What percent of your revenue is derived from:

U.S. _____%

Canada _____%

Europe _____%

Asia/Pacific _____%

Other International _____%

II. PRODUCTS AND SERVICES

What percent of your U.S. revenue is derived from information services (as defined by the eight service modes listed below)? _____%

What percent of U.S. information services revenue is derived from the following delivery modes:

1. Application Software Products _____% 5. VARs/Turnkey Systems _____%

2. Systems Software Products _____% 6. Professional Services _____%

3. Processing Services _____% 7. Systems Integration _____%

4. Network Services _____% 8. Systems Operations _____%

TOTAL 100%

What percent of U.S. information services revenue is derived from the following industry-specific/cross-industry markets? (If percentages are not available, please indicate applicable areas with an "X".)

Industry-Specific		Cross-Industry Application Solutions	
Banking and Finance	_____ %	Accounting	_____ %
Services (accountants, lawyers)	_____ %	Engineering/Scientific	_____ %
Distribution	_____ %	Education and Training	_____ %
Discrete Manufacturing	_____ %	Human Resources	_____ %
Education	_____ %	Office Systems	_____ %
Federal Government	_____ %	Planning and Analysis	_____ %
Insurance	_____ %	Sales/Marketing/Other	_____ %
Local Government	_____ %	SUBTOTAL	_____ %
Manufacturing	_____ %		
Medical	_____ %		
Process Manufacturing	_____ %		
Personal/Consumer Services	_____ %		
Retail Distribution	_____ %		
State Government	_____ %		
Telecommunications	_____ %		
Transportation	_____ %		
Utilities	_____ %		
Wholesale Distribution	_____ %		
Construction/Agriculture	_____ %		
SUBTOTAL	_____ %		

(Industry-specific + cross-industry = 100%)

Please briefly describe any alliances/joint ventures your company has:

1. _____
2. _____
3. _____

Any acquisitions? _____

Submitted by: _____ Date: _____

*Please put INPUT on your mailing list and send product literature.
Thank You.*

INPUT • 1280 Villa Street • Mountain View, CA 94041-1194 • (415) 961-3300

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Services (accountants, lawyers)	_____ %	Engineering/Scientific	_____ %
Distribution	_____ %	Education and Training	_____ %
Discrete Manufacturing	_____ %	Human Resources	_____ %
Education	_____ %	Office Systems	_____ %
Federal Government	_____ %	Planning and Analysis	_____ %
Insurance	_____ %	Sales/Marketing/Other	_____ %
Local Government	_____ %	SUBTOTAL	_____ %
Manufacturing	_____ %		
Medical	_____ %		
Process Manufacturing	_____ %		
Personal/Consumer Services	_____ %		
Retail Distribution	_____ %		
State Government	_____ %		
Telecommunications	_____ %		
Transportation	_____ %		
Utilities	_____ %		
Wholesale Distribution	_____ %		
Construction/Agriculture	_____ %		
SUBTOTAL	_____ %		

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Medical	_____ %		
Process Manufacturing	_____ %		
Personal/Consumer Services	_____ %		
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|---|---------------------------------|
| 1. Application Software Products _____% | 5. VARs/Turnkey Systems _____% |
| 2. Systems Software Products _____% | 6. Professional Services _____% |
| 3. Processing Services _____% | 7. Systems Integration _____% |
| 4. Network Services _____% | 8. Systems Operations _____% |

TOTAL

100%

What percent of U.S. information services revenue is derived from the following industry-specific/cross-industry markets? (If percentages are not available, please indicate applicable areas with an "X".)

Industry-Specific		Cross-Industry Application Solutions	
Banking and Finance	_____ %	Accounting	_____ %
Services (accountants, lawyers)	_____ %	Engineering/Scientific	_____ %
Distribution	_____ %	Education and Training	_____ %
Discrete Manufacturing	_____ %	Human Resources	_____ %
Education	_____ %	Office Systems	_____ %
Federal Government	_____ %	Planning and Analysis	_____ %
Insurance	_____ %	Sales/Marketing/Other	_____ %
Local Government	_____ %	SUBTOTAL	_____ %
Manufacturing	_____ %		
Medical	_____ %		
Process Manufacturing	_____ %		
Personal/Consumer Services	_____ %		
Retail Distribution	_____ %		
State Government	_____ %		
Telecommunications	_____ %		
Transportation	_____ %		
Utilities	_____ %		
Wholesale Distribution	_____ %		
Construction/Agriculture	_____ %		
SUBTOTAL	_____ %		

(Industry-specific + cross-industry = 100%)

Please briefly describe any alliances/joint ventures your company has:

1. _____
 2. _____
 3. _____
- Any acquisitions? _____

Submitted by: _____ Date: _____

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Thank You.*

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INPUT VENDOR ANALYSIS PROGRAM DIRECTORY

☐ New Entry ☐ Revised

Please provide as much data as known. Partially complete forms are welcome.

I. GENERAL INFORMATION

Vendor Name: _____

Address: _____

Phone: _____

CEO/President: _____

Name

Title

Key Contact: _____

Name

Title

Total Employees: _____ Year Founded: _____

Company's Primary Business: _____

Type of Ownership:

☐ Public

☐ Subsidiary

☐ Private

☐ Division

Parent Corporation _____

Subsidiaries: _____

Annual revenue \$ _____ Fiscal Year Ending _____ / _____ / _____
Mo Day Yr

—or—Revenue Range:

☐ Under \$1 Million

☐ \$10-20 Million

☐ \$1-5 Million

☐ \$20-40 Million

☐ \$5-10 Million

☐ Over \$40 Million

What percent growth did the company experience over the previous year? _____%

What percent of your revenue is derived from:

U.S. _____%

Canada _____%

Europe _____%

Asia/Pacific _____%

Other International _____%

II. PRODUCTS AND SERVICES

What percent of your U.S. revenue is derived from information services (as defined by the eight service modes listed below)? _____%

What percent of U.S. information services revenue is derived from the following delivery modes:

- | | |
|---|---------------------------------|
| 1. Application Software Products _____% | 5. VARs/Turnkey Systems _____% |
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| 3. Processing Services _____% | 7. Systems Integration _____% |
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TOTAL 100%

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Education	_____%	Office Systems	_____%
Federal Government	_____%	Planning and Analysis	_____%
Insurance	_____%	Sales/Marketing/Other	_____%
Local Government	_____%	SUBTOTAL	_____%
Manufacturing	_____%		
Medical	_____%		
Process Manufacturing	_____%		
Personal/Consumer Services	_____%		
Retail Distribution	_____%		
State Government	_____%		
Telecommunications	_____%		
Transportation	_____%		
Utilities	_____%		
Wholesale Distribution	_____%		
Construction/Agriculture	_____%		
SUBTOTAL	_____%		

(Industry-specific + cross-industry = 100%)

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TOTAL

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Local Government	_____ %	SUBTOTAL	_____ %
Manufacturing	_____ %		
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